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10 JUNE 1986

Worldwide Report

**TELECOMMUNICATIONS POLICY,
RESEARCH, AND DEVELOPMENT**

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10 JUNE 1986

WORLDWIDE REPORT
TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

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CANADA

GOVERNMENT PLANS TO PRIVATIZE TELEGLOBE STALLED

Toronto THE GLOBE AND MAIL in English 29 Apr 86 p B4

[Article by Christopher Waddell]

[Text] The federal Government's plans to privatize Telelobe Canada are stalled, pending decisions on telecommunications policy that have been before the Cabinet for the past month.

Proposals under consideration by the Cabinet would establish the ground rules for the final round of bidding for the Crown-owned company, which is responsible for international telephone and telecommunications traffic to and from Canada.

Possible buyers include Telecom Canada, a consortium of the country's telephone companies led by Bell Canada; CNCP Telecommunications; Power Corp. of Canada; British Telecom; and Canada Pensions Group, which represents a group of pension funds.

Decisions on whether the various bidders remain interested and how much they are prepared to pay will depend on the policy that emerges from the Cabinet.

Following the final submission of bids, the Government will analyze the offers and choose a winner — a process that could take several months, pushing privatization at least into the fall.

A central element of the Telelobe sale has been a debate between the departments of Regional Industrial Expansion and Communications.

DRIE — the department responsible for Telelobe through its control of the parent corporation, Canada Development Investment Corp. — has been the prime mover, anxious to complete the sale as soon as

possible. DOC officials, however, have argued that all policy questions relating to telecommunications must be determined before the sale can proceed.

For the moment, it appears the Communications Department has triumphed.

The Cabinet is now considering several issues, each of which will have a large impact on Telelobe's price tag.

Presently, Telelobe is the sole agency allowed to transmit and receive telecommunications information beyond North America. This monopoly has helped make the company highly profitable, making \$53.2-million last year on revenue of \$678.6-million, compared with a profit of \$46.1-million from revenue of \$591.1-million the year before.

If the new owners of Telelobe are not guaranteed a monopoly, profits and revenue will both be substantially less than at present.

Further complicating this issue, some customers already find Telelobe's rates too high and are bypassing it, transmitting information to the United States and then using U.S. systems, which are up to 25 per cent cheaper for transoceanic communications.

No one knows how extensive this is now or might become if Telelobe's rates go even higher.

To answer the question, the Department of Communications has commissioned a study on bypass problems from an Ottawa consultant. To date, that work has concentrated only on domestic bypass problems — the situation when

companies with several offices across the country establish their own telecommunications system, bypassing existing systems by linking their offices together with satellite dishes.

A related problem is the rate base for a privatized Teleglobe, assuming it will still operate under some form of regulation.

With the purchase price likely in the \$500-million to \$600-million range, any money the Government receives from the sale of Teleglobe in excess of the company's book value of approximately \$307-million can be charged directly against the over-all federal deficit in the year the sale occurs.

That creates an obvious incentive to get the highest possible price for the company. But presumably, the higher the purchase price, the higher a privatized Teleglobe must set its rates to allow the new owners to recover their acquisition and related costs. The higher the rates, the more likely users will bypass the system to go through the United States.

The Cabinet must also decide if foreign interests will be allowed to purchase a part share of Teleglobe.

Foreign ownership may be less important if Teleglobe is denied a monopoly on telecommunications transmission, but the Government is still likely to face pressure in the House of Commons to ensure the buyers are Canadian-owned and controlled.

During the winter, rumors suggested the Government would allow foreign owners to hold a maximum of 20 per cent of Teleglobe and the domestic telephone companies, bidding under the Telecom Canada banner, might be similarly restricted.

If they are held to these limits both Telecom Canada and British Telecom may decide not to submit final bids for the Crown corporation.

As a final issue, the Quebec Government has been lobbying heavily to ensure that when Teleglobe is privatized, the federal Government will obtain a commitment that the buyer will keep Teleglobe's head office in Montreal. That would preserve jobs and maintain the company's Quebec roots.

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CS0: 5520/79

CANADA

NORTEL BIDS FOR SINGAPORE CONTRACT; QUARTERLY PROFITS DROP

Singapore Digital Switching Contract

Toronto THE GLOBE AND MAIL in English 29 Apr 86 p B20

[Article by Lawrence Surtees]

[Text] The hopes of Northern Telecom Ltd. for increased business in Asia are being tested in a bid against four of its largest global competitors for a \$65-million contract in Singapore.

The contract from Singapore's Telecommunications Authority for digital switching equipment used to route subscriber telephone calls was put out to tender in August, 1984.

The initial contract is for equipment for 280,000 telephone lines, and it could be worth twice as much if an option to provide an additional 200,000 lines is granted.

The equipment under this contract will replace analog equipment, and will allow voice, data and video signals to be carried over conventional telephone lines. Singapore plans to spend a total of \$2.1-billion in the next five years on digital switching and fibre optic submarine cables to link the island state with other countries in mainland Asia.

Northern Telecom faces tough competition in its quest for the job. Bidding against the telecommunications equipment maker, based in Mississauga, Ont., are: Fujitsu Ltd. of Japan; Standard Elektrik Lorenz AG of West Germany, a unit of ITT

Corp. of New York; L. M. Ericsson Telephone Co. Inc. of Sweden; and CIT-Alcatel of France.

A Northern Telecom official said the awarding of the contract has been delayed because of the renegotiation of technical issues. Although a recent report from the Financial Times of London said Fujitsu and ITT are the companies to beat, the official said: "We don't assume, nor do we know if we're out of the running."

Northern Telecom Pacific has its regional headquarters for Southeast Asia in Singapore. Although the company has sold numerous business telephone switches in Singapore, it has extensive operations in nearby Malaysia, including manufacturing plants.

Northern Telecom has targeted Asia as its prime geographic market in which to increase international sales. Revenue from offshore accounted for only 4 per cent, or \$241-million, of 1985 revenue of \$5.8-billion. A five-year \$250-million contract recently awarded by Japan will boost that figure.

However, Singapore has yet to announce the winner of its contract and "to say anything else is pointless speculation," the Northern Telecom official said.

10 June 1986

First Quarter Profits

Ottawa THE CITIZEN in English 23 Apr 86 p A11

[Text] TORONTO (CP) — The lustre may be fading from Northern Telecom Ltd., the Canadian wonder company that has been a star in the international telecommunications market for the last decade.

The company's latest earnings report released Monday indicated declines in both revenues and earnings for the first and second quarter of 1986.

But shareholders at the company's annual meeting Tuesday were reminded of Northern Telecom's impressive average annual growth rate of 17 per cent in the last decade (a 24-per-cent average since 1982) and assured that the company will try to maintain its position as an industry leader.

Northern Telecom is the world's leading supplier of fully digital telecommunications systems and a leading supplier of information management systems for the office.

Earlier this year the company announced 240 layoffs in Ottawa and Aylmer effective May 2, and 302 employees were laid off in 1985. The cuts will leave the local division with 603 workers.

Employees have also been laid off in Brampton and London.

President David Vice said the company's aim is renewed growth by year-end.

The company reported a drop in net earnings to \$43 million U.S. in the first quarter from \$55 million in the first quarter of 1985 and predicted that second-quarter results will also fall short of the corresponding period last year.

(The company, which received 68 per cent of its 1985 revenues from the United States, reports its financial statistics in U.S. dollars.)

Earnings in the first half of 1986 will be more than 20 per cent below the previous forecast, the company's quarterly report said.

But sales and earnings will be strong in the second half so that "results of 1986 should compare favorably with 1985," chairman Edmund Fitzgerald said.

Northern Telecom blamed reduced sales and profit margins in its DMS central office telephone switching system business in the United States for the poorer first-quarter results.

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CSO: 5520/79

CANADA

GANDALF SIGNS AGREEMENT WITH PRC'S NANJING RADIO

Toronto THE GLOBE AND MAIL in English 6 May 86 p B22

[Article by Lawrence Surtees]

[Text] Gandalf Technologies Inc. of Ottawa has signed an agreement with Nanjing Radio Factory, which will begin making some of Gandalf's data communications equipment in Nanjing, China, later this year.

Under the \$470,000 agreement, the Chinese factory will manufacture and sell Gandalf modems, multiplexers and interface converters in China. Modems are used to exchange information between computer terminals over standard telephone lines. Multiplexers are used to convert data communication signals to transmittable frequencies.

Gandalf expects the Nanjing factory to begin making its equipment there this fall, said Desmond Cunningham, Gandalf chairman and chief executive officer.

He welcomed the agreement as the start of what he hopes will be a long-term relationship between Gandalf and the Chinese.

The agreement is basically a technology transfer agreement, and Nanjing Radio Factory will be able to exploit the technologies under it on a continual basis. The contract regarding price of components and royalties has a three-year term, said John Wandell, vice-president of sales at Gandalf.

The company hopes the transfer agreement will give Gandalf an edge over its competitors when selling larger systems elsewhere in China, Mr. Wandell said.

For its part, Chinese industry needs to gain increased experience

in the manufacture of advanced technology items. And as computers proliferate throughout China and the country slowly begins to modernize its telecommunications system, there is increased pressure to become self-sufficient in the manufacture of data communications hardware.

Nanjing Radio Factory currently employs 3,000 people and makes electronic products for both industrial and consumer markets. Nanjing is situated on the Yangtze River in Jiangsu Province, about 250 kilometres west of the southern port city of Shanghai.

Gandalf's entry into the Chinese market comes at an opportune time as the company faces increased competition in the already crowded North American market. Although Gandalf's revenue is rising steadily, profit growth still lags behind.

For the six months ended Jan. 31, Gandalf had profit of \$1.1-million on revenue of \$8.6-million, compared with profit of \$2.5-million on revenue of \$28.2-million a year earlier. For the year ended July 31, 1985, Gandalf had profit of \$1.24-million on revenue of \$85.8-million, compared with profit of \$5-million on revenue of \$80.1-million.

Gandalf's offshore business is increasingly outstripping revenue sources in North America. In China, Mr. Cunningham said, he expects Gandalf will play an important role in developing Nanjing Radio Factory's technological expertise, in addition to tapping a growing market. "We see many future opportunities there for us."

CANADA

ROGERS TO OFFER CABLE TV, COMPUTER INFORMATION SERVICE

Toronto THE GLOBE AND MAIL in English 24 Apr 86 p B4

[Article by Edward Greenspon]

[Text] Rogers Communications Inc. has finally found a way to arrange the elusive marriage of the century — bringing together cable television and computers in a new information service.

Rogers' cable-television subscribers in Toronto, Brampton, Ont., and Mississauga, Ont., will soon have instant access to 30 sources of general news, business news, stock market quotations, weather, sports news and entertainment information carried into personal computers over existing cable, said William Rogers, vice-president of Canadian operations.

The information originates with Associated Press, Canadian Press, Standard & Poor's, SportsTicker and the Soviet news agency Tass. It is sent to Rogers via satellite by a company in Boulder, Colo., called X*PRESS Information Services.

Jack Klinge, vice-president of sales for X*PRESS, said the service is not a data base, which subscribers can telephone for historical information. Instead, it provides a constant, 24-hour-a-day stream of current information, a total of 10 million words a day.

Toronto-based Rogers will charge \$24.95 a month for the service and a \$59.95 installation fee. There will be no additional user fees or access fees.

Mr. Rogers said the service is not for everybody, but will be of particular value to the financial community. At his company's behest, X*PRESS has added listings of the

Toronto, Montreal, Vancouver and Calgary stock exchanges to the flow of information available to subscribers.

"Our (sales) objectives in the Toronto area are not in the hundreds of thousands, but certainly in the thousands," he said.

Rogers was first licenced to carry this type of service in the late seventies and has been looking for a source of information ever since, he said.

To help market the new service, Rogers is teaming up with Computerland, the largest chain of computer stores in the country, owned by Computer Innovations Distribution Inc. of Mississauga.

Computerland will offer a discounted package price to consumers buying both personal computers and a subscription to the service.

The service is compatible with IBM computers or clones, the Apple IIc and IIe and the Commodore 64 or 128.

In accessing the data, subscribers must pick and choose between a variety of information categories. They also can program their computers to find particular subjects by providing key words. Somebody interested in the paper industry, for instance, could have the service print a copy of all stories with the words pulp and paper in them.

This effectively provides business users with an instant clipping service, said Paul Temple, director of product development at Rogers. "You can monitor your competitor."

There is little cost to Rogers of introducing the service, so it won't "be yanked off in a year if we don't get subscribers," he said.

As Canada's largest cable company, Rogers is hoping to learn from the service as part of its efforts to diversify the uses of cable television, company officials said. They plan to offer the service on their Vancouver cable system next.

Aside from marketing, the key to the service's success seems to be the viability of X*PRESS. Mr. Klinge said the company went on to its first system in February and currently has 500 to 600 subscribers on 38 systems in the United States. Another 40 systems are scheduled for launch before July 1, he said. He expects penetration levels to be higher in Canada, where downtown business areas tend to have cable television installations.

Rogers officials note that X*PRESS is a partnership between three major U.S. communications companies — McGraw-Hill Inc., Tele-Communications Inc. and Telecrafter Corp.

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CSO: 5520/79

CANADA

BRIEFS

SPAR, ZAMBIAN CONTRACT—Spar Aerospace, Ltd. of Toronto has received a \$10.5-million contract from the Canadian International Development Agency to build a satellite ground station in Zambia. Spar officials said the new 18-metre dish antenna is one of the first in the world to meet a new standard set by the International Telecommunications Satellite Organization. Intelsat operates a global network of communication satellites accessible by more than 160 countries. The project is part of a larger CIDA program to help countries in southern Africa build independent telecommunications links, thereby eliminating the routing of telephone calls through the Republic of South Africa. [Text] [Toronto THE GLOBE AND MAIL in English 24 Apr 86 p B17] /13104

CSO: 5520/79

INTERNATIONAL AFFAIRS

BRIEFS

RADIO ACCORD WITH IRAQ—An agreement between the State Committee for Radio at the GDR Council of Ministers and the Radio and Television Organization of the Republic of Iraq on cooperation in the field of radio service was concluded in Berlin. It continues the contractual relations that have existed since 1967 and envisages extended program exchanges and the promotion of cooperation in the advanced training of journalists. [Text] [East Berlin NEUES DEUTSCHLAND in German 8-9 Mar 86 p 2] /9604

GDR-CYPRUS TV AGREEMENT--Nicosia (ADN)--On Wednesday [19 March] the State Committee for Television attached to the GDR Council of Ministers and the Cyprus Broadcasting Corporation concluded in Nicosia an agreement in the field of television. In addition to intensifying mutual topical coverage, it particularly provides for improving the exchange of experiences. [Text] [East Berlin NEUES DEUTSCHLAND in German 20 Mar 86 p 2] /9604

GDR-CAMEROON TELECOMMUNICATIONS COOPERATION--East Berlin (ADN)--On Wednesday [19 March] Rudolph Schulze, deputy chairman of the Council of Ministers and minister of posts and telecommunications, received Claude Leonard Npouma, minister of posts and telecommunications of the United Republic of Cameroon, for a talk. They mainly discussed questions of safeguarding and preserving peace as well as of further developing cooperation in the field of posts and telecommunications. [Text] [East Berlin NEUES DEUTSCHLAND in German 20 Mar 86 p 2] /9604

CSO: 5500/3009

INTER-AMERICAN AFFAIRS

CARIBBEAN TV CHANGES WORRY ST VINCENT GOVERNMENT

St Vincent's Concerns

Bridgetown DAILY NATION in English 24 Apr 86 p 28

[Text] CBC-TV is caught in a dispute over its intended use of Channel 9.

The Caribbean Broadcasting Corporation station is in the row with St. Vincent and the Grenadines Television which has been using the channel before. And, according to reports, it could all see the governments of the countries of both stations being directly involved. Caribbean Broadcasting Corporation (CBC) in Barbados over the use of channel nine.

The dispute is a direct result of a CBC-TV plan to improve its television programming through the introduction of new services on various channels, one of them being Channel 9.

A source at the Government-owned television station in St. Vincent said the concern was that CBC-TV planned to switch from Channel 3 to Channel 9 which has been used by SVG-TV for over ten years.

"The matter is a very simple one; but yet it is one that could create problems for us. We have been transmitting on Channel 9 from our inception more than ten years ago.

"Last year we were informed CBC-TV was planning to halt transmission on Channel 3 and switch to Channel 9. They were planning to use two five-kilowatt transmitters in plural, which are certain to over-ride our signal to the Grenadines, and could also over-ride our transmission in St. Vincent itself.

"We only use a single 100-watt transmitter which is no match for what CBC-TV is

planning to use."

The St. Vincent television official understands the CBC-TV transmitters were already in Barbados and should soon be pressed into service.

He claims that since both stations were members of the Caribbean Broadcasting Union (CBU), CBC-TV was aware St. Vincent operated on Channels 7, 9 and 11, and if CBC-TV "wants to go to a higher VHF band, Channels 8, 10 and 12 were available".

St. Vincent's television authorities said yesterday they had written to secretary-general of the CBU, Mike Rudder, on February 21, last year, and Rudder had since written to CBC's general manager, Duncan Turney, copying the letter to the permanent secretary in the Ministry of Information as well as to SVG-TV.

Efforts to reach Rudder were unsuccessful, since he was attending a conference in Geneva. An officer of the union confirmed the CBU had received a letter from St. Vincent, that a letter was sent to the CBC general manager, but that so far no response had been received. The officer said, though, that since more than six months had passed since the letter from the CBU, the CBU was no longer expecting a response.

Repeated efforts to contact Turney were unsuccessful, but CBC's public relations officer, Victor Hinkson, said the official position of CBC was that there was no comment to make.

The television official in St. Vincent says his country's government is preparing a letter to send to the Barbados Government seeking clarification on the matter.

CBC Reassurances

Bridgetown SUNDAY SUN in English 27 Apr 86 p 48

[Text]

THE CARIBBEAN BROADCASTING CORPORATION (CBC) has stated that it has no intentions of causing interference to St. Vincent and the Grenadines Television (SVG TV) and is primarily concerned with upgrading its service to Barbadians.

This statement comes from the state-owned corporation following a report in last Thursday's NATION that the two stations were caught in a dispute over CBC's proposed use of Channel Nine, which has been used by SVG-TV for over ten years.

St. Vincent reportedly feared that the more powerful transmitters of the Barbadian station might over-ride its internal signals and those to the Grenadines.

"It is unlikely that CBC will cause deliberate interference to St. Vincent and the Grenadines Television on its proposed Channel Nine, since the signals will not be beamed to St. Vincent and the Grenadines as is presently the case with Channel Three," CBC said.

It said the corporation would be willing to work closely with SVG-TV to address any problems that may arise.

The corporation is trying to upgrade its services in Barbados and is replacing old low-band television transmitters at Sturges, St. Thomas, with new high-band transmitters.

The corporation said the reasons for switching to the higher band system are:

- To reduce powerline interferences and industrial noise now associated with Channel Three.
- To obviate co-channel interference from South American stations now being experienced.
- To facilitate installation of an additional antenna for the proposed subscription television service.
- To reduce energy consumption by using more energy efficient transmitters.

/9317

CSD: 5540/068

10 June 1986

INTER-AMERICAN AFFAIRS

TECHNOLOGY ON AIRWAVES THREATENS CARIBBEAN STABILITY

Bridgetown DAILY NATION in English 16 Apr 86 p 24

[Text]

THE DRAMATIC INVASION of Caribbean airwaves through technology, has to be viewed as a threat to the region's political stability.

This was stated by president of the Caribbean Publishing and Broadcasting Association (CPBA), Harold Hoyte, at the closing ceremony last Sunday of a four-day Press seminar held by Bustamante Institute of Public and International Relations.

Hoyte said the "unregulated flow" of news was posing a threat to regional culture.

He told journalists from Trinidad, Guyana and Barbados the media had a special role to defend the cultural and political sovereignty of the region.

He said: "I think it is the business of the CPBA and all those involved in the communications business, not only because it is a threat to the survival of our own indigenous systems, but a threat to our people."

"It is our business because of the critical link between communication and social, cultural, political and economic activity."

Hoyte said the situation pre-

sented a challenge to the survival of locally created television, but more important "is what it will do to our people's minds".

"In the war of ideas, there isn't room for our own ideas if our people's time is going to be so dominated by these American networks. And if our time is dominated by what is important to other people, it will only be a matter of time before what is really important to us is forgotten."

He said more people in the region knew about Baby Fay last year than they knew which prime ministers went to the Mustique meeting.

Hoyte noted there was nothing wrong per se with watching well-produced television programmes but what was wrong was that nothing else was watched in most territories.

"The cultural implications are multi-dimensional," he said. "The strong influence has led commentators to wonder what will become of poorer countries which become victims of this leisure culture as it is called."

/9317

CSO: 5540/068

BRAZIL

ARCHER ON POSITIVE RESULTS OF INFORMATICS LAW

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 12 Apr 86 p 28

[Text] According to Science and Technology Minister Renato Archer, the project for regulating the legal ownership and marketing of software (computer program) should be defined at the next meeting of the National Informatics Council (CNI) on 8 May. In an interview yesterday at RBN, Archer said that "the country cannot import software as it imports automobile projects and that therefore the sector needs to be regulated."

The minister said that the Informatics Law, which the United States regards as protectionist, has enabled the Brazilian market to grow. According to him, in 1977 the country had nine firms (three of them Brazilian) and the market amounted to \$200 million. Last year, Archer reported, there were already 276 Brazilian companies, covering 56 percent of the \$2.3 billion market. And what is more, 28,000 jobs had been created. Aside from Brazil, only three other countries have 50 percent or more of their data processing market within their territory--the United States, Japan and Germany.

Thus the provisions have benefited the country, Archer added, "because data processing is a basic tool we need to be able to compete with developed countries in industrial and agricultural production and in education."

Pressure

With regard to United States' pressure on the Brazilian data processing industry, Archer said that it was "completely unjustified." He added: "We have a type of market restrictions that is designed to protect the interests of foreign firms, such as in the case of the automobile industry. We started an automobile industry 40 years ago with foreign companies. We have afforded them market protection, and not for 8 years, as the Informatics Law established for companies in that sector, but for 40 years they have remained untouched. The result is that we have an automobile industry that works, but with one feature that it is important to bear in mind: Brazil pays royalties on the automobile models it manufactures, because Brazil has not designed these cars."

"We do not want the same thing to happen in the data processing sector," Archer argued. "Without data processing, the country cannot further its development in any sector. We needed experts here capable of making our own computers and our own software, and of solving our specific problems." He concluded by saying: "A computer program cannot be imported in the same way as a truck or an automobile."

10 June 1986

BRAZIL

GOVERNMENT NOT TO CHANGE INFORMATICS POLICY

Sarney Defends 'Sovereign Decision'

PY161848 Brasilia Radio Nacional da Amazonia Network in Portuguese 1000 GMT
16 May 86

[Text] Despite the U.S. Government's threat to enforce commercial retaliatory measures against Brazil, the Brazilian Government will not change its informatics policy. President Sarney has clearly expressed his opinion on this matter, saying that this is a sovereign decision that cannot be changed just because of foreign pressure.

The United States has no right to adopt retaliatory measures against Brazilian exports if the Brazilian Government refuses to repeat the measures that restrict the import of informatics equipment in Brazil. This was said yesterday at the Foreign Ministry by Pablo Noguera Batista the Brazilian ambassador to Geneva and Swiss-based international organizations. He was commenting on U.S. press reports which stated that the United States may take retaliatory measures against Brazilian trade before September.

The ambassador's statement confirms the Brazilian Government's decision to continue enforcing market restrictions on sales of imported micro and mini-computers, which allows foreign participation only through the import of foreign-made software. The Brazilian diplomat said that if the United States adopts retaliatory measures against Brazil, these will have to be approved by GATT and not merely by the U.S. Congress. The ambassador also explained that GATT includes provisions that allow its members to adopt trade restriction measures to protect new industries. The U.S. Government itself adopted restrictive measures to protect its informatics market for 5 years, while Brazil has enforced similar measures on other sectors, including the car industry.

As for international relations, Brazil does not violate any that may affect its informatics law. If the United States decides to suspend or decrease Brazilian imports, Brazil may answer this decision by opening the Brazilian car market to the Japanese or by imposing new taxes on foreign films. Brazil's reaction depends on the U.S. Government's official position regarding the issue.

Bill To Counter U.S. Sanctions

PY171921 Brasilia Radio Nacional da Amazonia Network in Portuguese 1000 GMT 17 May 86

[Text] Senator Severo Gomes of the Brazilian Democratic Mobilization Party (PMDB), Sao Paulo State, has submitted a bill which seeks to impose economic sanctions on those countries restricting imports of Brazilian products. The bill was prompted by reports

on U.S. measures restricting imports of some Brazilian products because of the computer market reserve established by the Brazilian informatics law.

Here are highlights of the measures proposed by Senator Gomes: Prohibit participation in any association or organization (?recognized) by the federal government, states, or municipalities; prohibit the sending of foreign currency abroad, representing profits, salaries, interest, amortization and so forth. [sentence as heard] The bill proposes that such profits be kept in the country as long as restrictions are imposed on Brazilian goods and services.

Brazilian and U.S. diplomats believe the pressures on the Brazilian informatics law are politically motivated and directly linked to the elections slated for this year in both countries. The Brazilian Foreign Ministry has stated that the Brazilian Government will request that the U.S. Government explain these press reports.

Science and Technology Minister Renato Archer has said that there is great confusion stemming from contradicting press reports concerning deadlines for amending the Brazilian informatics law.

/9274

CSO: 5500/2046

BRAZIL

TALKS ON INCREASED COOPERATION WITH ITALY HELD

Rio de Janeiro O GLOBO in Portuguese 2 Apr 86 p 7

[Excerpt] Italian Telecommunications Minister Antonio Gava said yesterday that his country intends to operate in the communications sector in Latin America and the negotiations between Brazil and Italy would open the door for future transactions. Gava praised the efforts the Brazilian government has been making to bring inflation down to tolerable levels.

According to the Italian minister, an inflationary index of 250 percent hampers relations with other countries interested in conducting trade negotiations. An economic policy designed to reduce inflation is, in Gava's view, certain to engender the interest of other countries in Brazil.

He met yesterday with Brazilian Communications Minister Antonio Carlos Magalhaes to look at the results and prospects for furthering technical cooperation and technology transfers between the two countries in the field of communications. The ministers took note of the success of the cooperative programs between Telebras and Stet, the Italian government holding company.

Antonio Carlos suggested to the Italian minister that the technical cooperation agreement be renewed and Gava indicated that his government was prepared to transfer to Brazil all the experience it had acquired in digitizing the domestic telecommunications network. The Italian minister acknowledged that the satellite communications system, which Brazil reinforced with last Friday's launching of Brasilsat 2, opens up new fields of cooperation between the two countries.

The Italian and Brazilian ministers took note of management agreements which are being designed or have already been worked out to provide for joint undertakings in important, high-technology sectors. They further noted that private Italian groups were still conducting investigations in the telecommunications sector.

The following also participated in the ceremony at the Communications Ministry: Italian Ambassador Vieri Traxler; Ambassador Paulo Tarso Flexa de Lima, secretary-general of the Ministry of Foreign Affairs; Romulo Furtado, secretary-general of the Ministry of Communications; leaders in the telecommunications sector from the Italian and Brazilian governments; and, the vice president of Rede Globo, Roberto Irineu Marinho.

Stepped-up cooperation between Brazil and Italy, primarily in the communications sector, is what Italian Minister Antonio Gava and Brazilian Chancellor Abreu Sodre would like to see, and yesterday they held talks for over 30 minutes on the agreements signed between the two countries.

9805/12851

CSO: 5500/2039

BRAZIL

BRIEFS

CHINA-BRAZIL ACCORD—EMBRATEL will be representing the Chinese Ministry of Posts and Telecommunications at the International Telecommunications Satellite Organization, an international consortium which manages use of the Intelsat satellite. The agreement was signed this week by EMBRATEL President Pedro Jorge Castelo Branco Sampaio and the director of foreign affairs of the People's Republic of China, Zhao Xintong, on the same terms as the others concluded with the National Telecommunications Administration of Uruguay and the Portuguese Radio Marconi company. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 15 Apr 86 p 24] 9805/12851

CSO: 5500/2039

CUBA

SATELLITE ACCESS TO SCIENTIFIC DATA IN USSR, BULGARIA

Havana GRANMA in Spanish 1 Apr 86 p 3

[Article by Orfilio Pelaez]

[Text] One of the main accomplishments of the Scientific and Technical Documentation and Information Institute (INDICT) of the Cuban Academy of Sciences during the 1981-85 5-year period was undoubtedly laying the groundwork for the use of satellites to obtain access to data bases.

The need for quick access to world information banks led to the initiation of these projects at IDICT in January 1983, as part of the effort to improve the National System of Scientific and Technical Information. In the beginning, the CEMA International Scientific and Technical Information Center lent assistance.

In June 1983, a pact was signed between the Cuban Academy of Sciences and the State Committee on Science and Technology of the USSR. According to this agreement, which governed satellite access to data, the USSR was to provide the necessary equipment for the establishment of a terminal station in Cuba for this purpose.

Later a satellite communication channel was established between Havana and Moscow, and the first demonstrations of satellite access were made from the Palace of Conventions in December 1983, during the session of the National Assembly.

In 1984 the number of hours of access to NODO (the head of the system) each week began to rise. NODO is operated by the Institute of Automated Information Systems of the Soviet State Committee on Science and Technology.

At present, we have connections with Soviet and Bulgarian data banks, enabling us to consult 1.25 million references of scientific documents from various countries.

This year connections are scheduled to be made with data banks in Hungary, Czechoslovakia and Sweden, which will broaden our access to world data resources.

Furthermore, a Soviet EC-1035 computer is being installed now. It will serve as a data base distribution center for the national scientific and technical information system.

This entire system of satellite data access is part of the project to create the National Science and Technology Library, which will use this method to receive information from the principal scientific centers of the world.

8926

CS0: 5500/2042

MEXICO

ERICSSON WINS CONTRACT FOR DIGITAL PHONE EXCHANGES

Stockholm SVENSKA DAGBLADET in Swedish 24 Apr 86

[Article by SVENSKA DAGBLADET]

[Text] Ericsson has received an order worth well over 1.3 billion kroner from Mexico. The order concerns delivery of digital phone exchanges and other telecommunications equipment for the country's telephone administration.

The order concerns primarily equipment in conjunction with Mexico's development of its telephone network in 1987 but also comprises four digital AXE phone exchanges. The AXE phone exchanges constitute part of the reconstruction program following last year's earthquake.

The largest order concerns a turnkey contract for digital AXE phone exchanges for local and transit communications and a number of computerized operational and maintenance exchanges of the AOM type. The exchanges, which are scheduled for delivery in the course of 1987, correspond to a total of 230,000 phone lines.

Another order concerns analog phone exchanges and digital and analog transmission equipment. The major part of this equipment will be produced by Ericsson's Mexican subsidiary, Teleindustria Ericsson S.A.

7262

CSO: 5500/2669

TRINIDAD AND TOBAGO

STATE-OWNED TV, TEXTEL IN LICENSE DISPUTE OVER DISH

TTT Satellite Plans

FLO22335 Bridgetown CANA in English 2318 GMT 2 May 86

[Text] Port of Spain, 2 May (CANA)—Trinidad and Tobago External Telecommunications Company (Textel) stands to lose 1.2 million dollars (one TT dollar, 27.7 cents U.S.) as a result of plans by state-owned television station, TTT, to erect a satellite dish in its backyard, a press report said today.

The EVENING SUN newspaper quoted a TTT source as saying that the station is spending 1.5 million dollars to install the dish, which will allow it to receive programmes directly from abroad.

When the dish is erected, the source said, TTT would save the 100,000 dollars it spends a month to transmit programmes through Textel—an expected 1.2 million dollar saving for the station but, at the same time, a loss for Textel.

In the past, the SUN said, TTT worked under a license which allowed Textel the sole right to receive and transmit internal telecommunications. If the report is true, TTT is infringing on our rights, the SUN quoted Textel's general manager, Lennox Worrell, as saying.

Licensing Considerations

Port-of-Spain TRINIDAD GUARDIAN in English 3 May 86 p 1

[Text] Officials of State-owned Trinidad and Tobago Television (TTT) have refused to comment on problems brewing in connection with its planned erection of a satellite dish system.

General Manager of TTT, John Barsotti, gave a firm "No Comment" yesterday when asked about the satellite dish and any breach of licence which the company may be committing by erecting the system.

It is understood that excavation work for erection of the satellite dish is currently being carried out at the station's Maraval Road premises. One estimate of the approximate overall cost has been set at \$1.5 million.

Sole Textel Right

However, Textel officials have indicated that TTT's plan to have a satellite would be a breach of the licence under which it operates. This licence gives Textel the sole right to receive and transmit telecommunications.

A TTT source said yesterday that while the station is indeed in the process of setting up a satellite, no one was aware that there was a problem with Textel.

Still, regarding the alleged problems, a source from the Ministry of Public Utilities pointed out that the State-owned utilities and enterprises have been reminded to continue cost-cutting wherever possible by not duplicating equipment.

"Some sectors have been duplicating equipment, installing types that other State enterprises have, all at costs which the consumer has to pay. We are hoping that this will be avoided wherever possible," the source said.

/9274

CSO: 5540/069

TURKS AND CAICOS

BRIEFS

PRIVATIZATION OF BROADCASTING--An announcement by Chief Minister Nathaniel Francis during the budget session that the Broadcasting media is to be privatised has been reflected in the estimated expenditure for this establishment, where financial provision has been made for only three months in keeping with a decision to privatise by June 30. Subsequently, a sum of only \$34,536 has been ear-marked for this establishment as against \$121,972 actually released last year, and for this year a total of \$16,600 has been provided for salaries as against \$60,224 of last year. The announcement comes at a time when the Broadcasting media is beset by financial and operational problems. [Text] [Grand Turk TURKS & CAICOS NEWS in English 4 Apr 86 p 1] /9274

CSO: 5540/070

ALGERIA

ERICSSON IN FRAMEWORK AGREEMENT TO MODERNIZE COMMUNICATIONS

Stockholm DAGENS NYHETER in Swedish 24 Apr 86 p 11

[Article by Sven Oste: "Big Deal With Algeria"]

[Excerpt] A framework agreement regarding Swedish-Algerian cooperation for telecommunications was signed on Wednesday in Stockholm. If the continued negotiations are concluded without a hitch, Ericsson will get a contract valued at nearly half a billion kronor.

What is involved is a major modernization of the telecommunications network primarily in the capital of Alger including 220,000 lines, digital exchanges, etc. Swedtel AB will also, it is hoped, sign a contract, primarily involving training.

"We are hoping for a rapid decision," Foreign Trade Minister Mats Hellstrom stressed at the signing at the Foreign Ministry.

On the part of Algeria the framework agreement was signed by Planning Minister Ali Oubouzar. The ceremony took place in connection with President Benjedid Chadli's state visit.

Negotiations between Ericsson and the Algerian state have been under way for a long time. On the part of Algeria there are efforts to connect such commercial agreements with a state guarantee. This is a pattern which the Swedish government does not want to accept.

Compromise

But the framework agreement is a compromise, observers emphasize. Sweden, for its part, stresses that the state might undertake efforts to find favorable financing. This means mainly contributions from BITS (Committee for International Technical-Economic Cooperation). This organization was created about 10 years ago, precisely with a view to Algeria and the goal of facilitating agreements with nations which are not defined as assistance nations.

Negotiations

Hope was expressed by both sides during the signing that the framework agreement will become a formula for agreements in other areas as well. On the part of Algeria it was often emphasized that a role for Swedish companies could be envisioned for example in the production of automobiles and pharmaceuticals in Algeria.

11949

CSO: 5500/2680

INDIA

INDIA INTERESTED IN MINITERMINAL SATELLITE MANUFACTURE

Madras THE HINDU in English 18 Apr 86 p 7

NEW DELHI, April 17.

[Text] India has evinced interest in manufacturing the new mini-terminal "Standard-C" developed by the International Maritime Satellite Organisation (INMARSAT) and in availing itself of the wide range of satellite communication services offered by INMARSAT not only in the maritime sector but also in aviation and surface transport sectors.

This is the outcome of the discussions the INMARSAT Director General, Mr. Olof Lundberg, had here with Indian Government representatives during the last two days. Among those whom Mr. Lundberg met were the Communications Minister, Mr. Ram Nivas Mirha, the Civil Aviation Minister, Mr. Jagdish Tytler, the Surface Transport Minister, Mr. Rajesh Pilot, the Telecommunications Secretary, Mr. D. K. Sangal, the Secretary to Department of Science and Technology, Dr. S. Ramachandran and the Space Department Secretary, Mr. U. R. Rao.

Positive response: Mr. Lundberg told THE HINDU that during these meetings he had made a number of proposals for greater Indian participation in the activities of INMARSAT and the response from the Government of India representatives was quite positive. He noted that INMARSAT operated a system of satellites to provide telephone, telex, data and facsimile besides distress and safety communication services to the shipping and offshore industries. Over 4,300 users were equipped with ship or transportable earth stations to access the INMARSAT system. These included Indian ships and offshore industries. There were 21 Indian terminals of which two were in Antarctica.

Besides maritime communication services, the INMARSAT provided links between the satellites and international telecommunication networks through a chain of coastal earth stations, which were owned and operated by the member-country where it was located. There were now 14 coastal earth stations one each in Greece, Brazil, France, Italy, Kuwait, Norway, Singapore and Britain and two each in Japan, the U.S. and the Soviet Union.

New type of terminal: Mr. Lundberg said the INMARSAT had now developed a new type of lightweight, low-cost satellite communication terminal, capable of receiving and transmitting

data or text communications anywhere within the worldwide coverage of its satellite system. Named Standard-C, the new system represented a radical development in satellite communication, he claimed. Its size, portability and low cost would enable the establishment of a high quality data communication link at any time.

In marine environment, Standard-C would extend the advantages and reliability of satellite communication to all vessel operators and boat owners. Besides receiving and transmitting text or data messages, the terminal would be used as enhanced group call (EGC) receiver for marine safety and other group or area broadcast information, global message paging and news bulletins.

On land, Standard-C could be used for remote monitoring and control applications, such as unmanned weather stations or oil and gas well-heads.

The cost: Mr. Lundberg explored the prospects of India taking up manufacture of this mini-terminal and making use of it for providing communication links with moving trains and trucks. According to him, the public sector Indian Telephone Industries (ITI) had shown interest in undertaking the manufacture of this device. At present the cost of production is estimated at Rs. 40,000 per terminal, but it can be brought down to Rs. 15,000 if the volume of production is increased.

The INMARSAT, Mr. Lundberg said, had diversified its operations to provide satellite communications to the aviation community. Two types of services were now under development. One sought to provide low speed data links for airline operational, meteorological, air traffic control, position and performance monitoring and safety communication. The equipment required aboard an aircraft to access this service would be compact and simple. The

other service would be capable of providing higher speed data and voice communications, including payphone facilities for airline passengers.

The major users of voice services were expected to be passengers placing telephone calls through in-cabin handsets activated by credit cards and switched through the receiving earth stations into the international telecommunications network. Business passengers could send telex-type messages.

Mr. Lundberg said the Indian Space Research Organisation, Civil Aviation Department and Indian Airlines had evinced interest in making use of these facilities and he expected them to participate actively in the trial and demonstration of these devices.

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CSO: 5550/0113

INDIA

DEPARTMENT OF ELECTRONICS ISSUES ANNUAL REPORT

New Delhi PATRIOT in English 19 Apr 86 p 2

[Text]

The Indian electronics industry grew by 40.7 per cent in 1985 with consumer electronics accounting for the highest growth rate of 75.5 per cent, reports Unifin.

According to the annual report of the Department of Electronics for 1985-86, the total electronics production in 1985 was around Rs 26,600 million compared to Rs 18,900 million in 1984 and Rs 13,600 million in 1983.

The production of consumer electronics rose to Rs 10,300 million against Rs 5,870 million in 1984. The growth in consumer electronics was accompanied by a fall in prices. Production of TV receivers registered a significant increase.

In 1985, the production of black and white TV sets touched 1.8 million against one million in 1984, a growth of 80 per cent. Colour TV receivers reached a level of 0.66 million units compared to 0.28 million in 1984, registering a growth of 136 per cent. The output of tape-recorder increased from 1.22 million in 1984 to two million in 1985, a growth of 60 per cent.

The report says that the import content in CTVs was of the high order of 80 per cent. But, it hopes, that with the number of licences given for the manufacture of CTV components, there would be significant decline in imports within a year.

In the area of VCR/VCP and microwave oven, more than 100 applications are being processed by an inter-departmental task force. The Government policy is to encourage only such units which would be prepared to commit sizable investment for suitable vertical integration, with an accelerated phased manufacturing programme and which have the requisite in-built capacity to keep pace with technological changes.

The communication and broadcasting sector has shown a growth rate of 18 per cent with production increasing from Rs 3205 million in 1984 to Rs 3800 million in 1985. The private sector has been given 40 letters of intent for the manufacture of electronic telephones, 12 for electronic PABX, two for electronic teleprinters, eight for digital facsimile equipment and three for electronic pay phones.

A major programme for the manufacture of high power microwave tubes is being implemented by Bharat Electronics Limited and Defence Research and Development Organisation. Production of tubes is expected to commence in the latter half of 1986-87. DOE approved 10 different cases of industrial licences in the defence and aerospace sectors.

In the sector of control instrumentation and industrial electronics, the working group on test and measuring instruments for

the seventh Plan had estimated the demand in 1985-86 at around Rs 125 crore whereas the production is not expected to exceed Rs 65 crore. In 1986-87, the demand has been projected at Rs 145 crore and the production is expected to be around only Rs 80 crore. Only four letters of intent have been issued for the manufacture of test and measuring instruments in 1985-86.

In computer systems, the production increased from Rs 920 million in 1984 to Rs 1550 million in 1985, a growth rate of 68.5 per cent. Compared to a production of 2000 mini/micro systems in 1984, the output in 1985 is expected to be around 5000 to 5500 systems, a 150 per cent growth rate in physical terms.

DOE has initiated steps for setting up a centre for the development and production of computer mainframes. The Electronic Corporation of India (ECIL) which will undertake the project had already taken the necessary measures for acquiring land and construction of the building. An investment of Rs 35 crore has been approved.

The electronics components industry grew by 35.2 per cent in 1985. Production of B/W TV picture tubes rose from 0.81 million in 1984 to 1.45 million last year, a growth of 80 per cent.

In value terms, the production of the components sector rose from Rs 303 crore in 1984 to Rs 411 crore in 1985. Major investments were made in this area. The DOE report says, to expedite clearance of project proposals by the financial institutions, a working group has been set up with representatives of the Departments of Electronics, Industrial Development and Industrial Development Bank of India. The Santa Cruz Export Processing Zone, however, registered a negative growth of 17.9 per cent. In 1985, 79 applications were received under the 100 per cent export oriented scheme. Out of this, 18 were from non-resident Indians. The export target for the terminal year of the seventh Plan (1989-90) has been set at Rs 1,000 crore.

/12828

CSO: 5550/0114

INDIA

MINISTRY OF BROADCASTING RELEASES ANNUAL REPORT

New Delhi PATRIOT in English 19 Apr 86 p 5

[Text]

A big expansion plan has been prepared for Doordarshan during 1985-87, reports PTL.

An amount of Rs 124.30 crores, has been earmarked for this purpose, a little higher than half of the Rs 242.30 crore approved for the Information and Broadcasting Ministry during the financial year, according to the annual report of the Ministry for 1985-86.

Provision has been made for setting up TV studio centres at Bhopal, Patna and Bhubaneswar.

Arrangements have also been made for renewal, replacement and modernisation of equipment, expansion of primary service, TV coverage in border areas and satellite uplinks. Besides, on-going schemes of TV studios at Jaipur, Ahmedabad and Trivandrum, and civil works for Lucknow, Bangalore and Guwahati studios will be completed.

According to the report, provision has been made for acquisition of sites, placing of orders and payments of initial advances for equipment for the various new schemes under the plan.

Civil works for studio centres at Silchar, Imphal, Aizawl and Hyderabad will be completed. TV Transmitters of 10 kw power will be commissioned at Vijayawada, Poonch, Panaji, Agartala and

Vinakhapotnam.

The main objective of the Doordarshan's annual plan for 1985-86, had been to complete the schemes spilled over from the Sixth Plan for which Rs 47 crore had been earmarked.

The report says for new schemes an outlay of Rs seven crore was provided during 1985-86. Continuing schemes spilled over from the Sixth Plan executed during 1985-86 included commissioning of TV transmitters of full 10 kw power at nine places, commissioning of Low Power Transmitters (LPTs) at three places, commissioning of second channel at Bombay on 1 May last of civil works of studio buildings at Calcutta, Jaipur, Ahmedabad and Trivandrum, acquisition of sites for programme production centres for north-east plan projects, finalisation of sites for studio centres at Bhopal, Patna and Bhubaneswar, and introduction of teletex service in Delhi in November last.

The report says that during 1985-86, the Seventh Plan of Doordarshan involving an outlay of Rs 700 crore was approved.

Over 60 per cent of the total plan outlay, according to it, is proposed to be utilised for creation of new programme production facilities and augmentation and modernisation of the existing

ones.

The schemes include establishment of full-fledged TV studio centres at the capitals of six major states where these facilities do not exist at present.

In addition, programme generation facilities are proposed to be provided at the capitals of smaller states and in most of the union territories.

The report says that with the completion of these new schemes and those already under implementation, all States and most of the union territories would have facilities for production of programmes.

TV studio centres are also proposed to be set up at important cultural centres in major states. Provision has been made for establishment of microwave and satellite links necessary for primary service. A major scheme for modernisation and replacement of existing studio equipment has been included in the Plan.

The report further says that due attention has been paid to the expansion of transmitter network with a view to providing TV service to about 80 per cent of the country's population by the end of the plan period. A number of special schemes for software development are also proposed to be taken up during the plan period.

INDIA

GOVERNMENT ACCEPTS MEDIA ADVISORY PANEL GUIDELINES

Bombay THE TIMES OF INDIA in English 29 Apr 86 p 16

[Text]

NEW DELHI, April 28
(PTI & UNI).

GUIDELINES framed by the high-level media advisory committee attached to the ministry of information and broadcasting relating to news policy for broadcast media has been accepted by the government and communicated to All India Radio and Doordarshan, the Lok Sabha was informed today.

These guidelines provide for ensuring objectivity, impartiality and accuracy in Doordarshan's newscasts, the minister of state for information and broadcasting, Mr. V. N. Gadgil, told Mr. Jai Prakash Agarwal in a written reply.

The basic features are:

- 1) The reporting of the news has to be factual, accurate and objective.
- 2) Each news story should be judged strictly on the basis of its news value.
- 3) In the selection of news, AIR and Doordarshan should be guided by the highest possible professional standards.
- 4) Where necessary, background to the events and happenings should be provided to help place them in perspective.

CRITERIA OF ACCURACY

- 5) News should satisfy the highest criteria of accuracy and responsibility.
- 6) People's participation in developmental activities and significant work being done by voluntary agencies should be highlighted.
- 7) The style and method of news reporting should reinforce the fundamental principles of national policies, including territorial integrity, national integration, secularism, maintenance

of public order and upholding the dignity and prestige of parliament, state legislatures and the judiciary.

8) Ministerial statements and policy matters, particularly those of the Prime Minister, and implementation of government programmes should be given proper place in the news. The focus should be on information rather than on individuals.

9) In reporting political controversies, the broadcast media should be guided by objectivity and fair play. Due representation of differing views should be the aim.

10) In the choice of international events, the objective should be to keep the people informed of world developments.

In reply to a question, the minister said it was not feasible to include "Sansad Samachar" and "Parliament news" in the national programme of Doordarshan due to inadequacy of time.

CELL FOR JOURNALISTS: The government ruled out a suggestion for creation of a special cell in the ministry of information and broadcasting to provide protection to journalists, particularly those living in the mofussil and interior areas.

Mr. Gadgil was replying to a question by Mr. Mewa Singh Gill on the suggestion given by the Indian Federation of Working Journalists (IFWJ).

Mr. Gadgil said the government was of the view that the existing arrangements were quite adequate to protect the lives and property of journalists to enable them to discharge their professional obligations effectively.

"Specific cases of harassment or assault, if any, brought to the notice of the government are looked into," he said.

Replying to a supplementary, Mr. Gadgil said figures received from the states did not show that the assaults on newsmen were on the increase.

Mr. Gadgil said a few states had reported some cases of assault. But most states had not reported any case.

Mr. K. K. Tiwari said assaults on journalists deserved to be condemned. He said newspaper reports showed that harassment of newsmen were on the increase. The extremists in Punjab had prepared a hit list of journalists, and, if so, what action does the government propose to take in this regard, he asked.

Mr. Gadgil reiterated that the figures he had received from the states did not show prima facie at least that the assaults were on the increase. He said some individual cases had been brought to his notice by some members of parliament.

But when those cases were referred to the states concerned, he received replies that most of the specific cases did not relate to professional matters of journalists but related to other reasons like personal frills.

On the threats posed by extremists, Mr. Gadgil said, the matter was being looked into by the ministry of internal security.

Replying to Mr. Dinanath Goswami, Mr. Gadgil said the government believed in a free and fearless press. "I salute the journalists who perform their duty fearlessly in the public interest."

In regard to certain specific cases, Mr. Gadgil said he had sought information from the states. They were being investigated.

NEWSPRINT & PROBLEMS: The finance ministry is examining the representations of the Indian and Eastern Newspaper Society (IENS) regarding newsprint and problems relating to the printing industry, the house was informed.

The representations demanded abolition of customs duty on newsprint, reduction in customs duty on RC paper, graphic art film and pre-sensitized offset plates and investment allowance on capital goods-equipment for printing industry, Mr. Gadgil said in a written reply.

/12828

CSO: 5550/0118

INDIA

MINISTER DISCUSSES PLANS TO IMPROVE TELEPHONE SERVICE

Bombay THE TIMES OF INDIA in English 25 Apr 86 p 17

[Text]

NEW DELHI, April 24.

CONSULTATIONS are on with neighbouring countries for introducing fully automatic subscriber trunk dialling (STD) and telex services.

This was one of the objectives set for SAARC by the recent summit conference held at Dhaka.

Mr. Ram Niwas Mirdha, the minister for communication, informed the parliamentary consultative committee attached to his ministry that at present telecom services to neighbouring countries like Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka, were provided through reliable broad-band media.

Provision was available for fully automated services to these countries. At present a semi-automatic dialling was prevalent for Pakistan, Nepal, Bhutan and Sri Lanka.

LOCAL NETWORK

The minister revealed that the targeted additional capacity for the local telephone network had been exceeded by 17 per cent, 57,000 more than the targeted 300,000.

As regards utilisation through new lines, the achievement was 2.67 lakhs against the target of 2.2 lakhs.

The total number of working connections in the country now was 31,65,642, while the total exchange capacity was 36,64,042.

Spelling out the broad spectrum of modernisation planned Mr. Mirdha told the committee that directory enquiry service '197' and trunk manual exchanges were being computerised and the facility was being extended to 32 important stations.

Another technological innovation planned was the extending of the mobile radio telephone service to the national capital region and Bombay.

The radio paging service, introduced in Delhi, would be extended to ten more stations namely Bombay, Calcutta, Madras, Ahmedabad, Bangalore, Hyderabad, Kanpur, Pune, Jaipur and Ernakulam.

Six more trunk automatic exchanges had been expanded with a total capacity of 5,400 lines last year. In the current year digital type trunk automatic exchanges were proposed to be commissioned at Agra (2,000) Pune (3,000), Tiruchi (2,000) and Lucknow (1,000).

TELEX EXCHANGES

Twenty-one more telex exchanges were added to the network with 1,580 more lines making a total capacity of 40,674.

The minister said his department had proposed a provision of 29-lakh do. for exchange lines and extension of public telephones to within five km of every village through about 22,000 additional LDPTS in the seventh plan.

An investment of Rs. 11,282 crores was needed to achieve this target.

The planning commission was, however, able to allocate only Rs. 4,010 crores.

/12828

CSO: 5550/0115

INDIA

P&T NETWORK FOR TRADE AND INDUSTRY PROPOSED

Bombay THE TIMES OF INDIA in English 28 Apr 86 p 7

[Text]

MADRAS, April 27.
TELECOMMUNICATIONS
An overlay network is proposed by telecommunications department to meet the special needs of industry and business for more advanced and reliable telecommunications service. The overlay network would have proper linkage with the existing one.

An inter-departmental committee with representatives of the departments of telecommunications, electronics, space and economic affairs has been appointed to work out the feasibility of the overlay network. Mr. D. K. Sangal, secretary (telecommunications) has said in a message to a seminar on "business opportunities in telecommunication sector" here, organised by the southern regional unit of the Association of Indian Engineering industry, (AIEI).

Mr. Sangal said the poor service from the existing life-expired equipment would continue owing to resources constraints. In a bid to increase the resources, the Mahanagar Telephone Nigam would enter the market for substantial borrowings in 1986-87, he said.

The idea was to supplement the allocation of Rs. 4,050 crores through direct borrowings from the public. The allocation consisted of Rs. 2,500 crores of internal resources and Rs. 1,510 crores of budgetary support for the telecom sector in the seventh plan as against the department's proposal for an investment allocation of Rs. 10,570 crores.

Mr. U. D. N. Rao, director of the Telecommunication Research Centre, said though modern technology was the key to development of telecommunications, a transplanted system from the West would not work here. Adaptations would be necessary to suit local conditions.

Mr. Rao said the department hopes to build up a national optical fibre network during the seventh plan. The network would include the four metropolitan cities as also some other cities like Bangalore, Ahmedabad and Baroda would be linked up. To begin with, for experimental purposes.

Optical fibres had great potential and was in close competition with satellite communication system. It would come in a big way as it was extremely good for long distance transmission and for use within cities for junction cables, Mr. Rao said. A factory being set up by the government would produce 40,000 km. of optical fibres a year.

He said the idea of using the public telephone system for data communication had not caught up. The P & T department could invest in this area if there was interest among users.

The telephone system was being used for private conversation, he said. A study five years back had shown that 14 per cent of the calls over the telephone lasted more than three minutes, a message taking 15 minutes to be conveyed orally over the telephone would take just 20 seconds when transmitted as data.

If the requirement of voice transmission was eliminated, a low-cost mission was eliminated, low-cost could be developed.

/12828

CSO: 5550/0116

INDIA

BRIEFS

SECOND CHANNEL HOOKUP--Bombay--Union Information and Broadcasting Minister V N Gadgil today said the proposed second channel on Doordarshan would start on the national hookup from July this year. Speaking at a press conference here, the Union Minister said 20 per cent of the programmes telecast from the existing channel, will also be telecast from the second channel, which now is operational only in Delhi. Mr Gadgil said the teletext service, which was already operating in Delhi, will soon be introduced in Bombay and later in Madras and Calcutta. A "breakfast television programme" comprising yoga exercises, general non-formal education and late night news not covered by daily newspapers, was under consideration, he said. The extent of advertisements on television was limited to five per cent. [Text] [New Delhi PATRIOT in English 28 Apr 86 p 6]/12828

CSO: 5550/0119

GHANA

POSTAL OFFICIAL CITED ON COMMUNICATIONS, MODERNIZATION

AB162240 Accra Domestic Service in English 2100 GMT 16 May 86

[Text] The satellite earth station at Kuntunse, which is Ghana's gateway to other parts of the world, is working satisfactorily in spite of a few technical problems. This assurance was given by the director general of the P and T [Posts and Telecommunications] Corporation, Colonel Kwesi Oppong, retired, at a news conference in Kuntunse to mark the 18th World Telecommunications Day celebration. He said all the 41 circuits for external telephones, telex, and telegraphic services are going through. The only problem is with the TV transmission link and the automatic tracking unit of the antenna. Colonel Oppong said, however, that measures are well in hand to rectify these difficulties and to also rehabilitate the entire station in preparation for the next INTELSAT program which starts next year. He said originally, the earth station project included the provision of an international telephone switch for automatic dialing. Unfortunately, the contractors failed to install the equipment. He gave the assurance that plans have been completed to procure the switching equipment, and it is expected to be put in service by the middle of next year.

On the construction of the Ghana portion of PANAFTEL, Colonel Oppong said the corporation has completed and tested the link to Togo, and it is in the final stages of completing the link to the Ivory Coast border. When completed, the project will enable Ghana to communicate with her West African neighbors directly without passing through Europe. Also, the Ghana portion of its microwave radio link with Burkina Faso has almost been completed.

Colonel Oppong said over the past 10 years the corporation has embarked on projects involving well over \$100 million. These projects include the expansion and improvement of facilities and services in the Accra metropolitan area, and microwave radio network in the whole of the country for use principally by the P and T, and the Ghana Broadcasting Corporation [GBC].

On the role of users of telecommunications facilities and services, Col Kwesi Oppong said they must assist the corporation to provide satisfactory services. He also appealed to both users and the general public to minimize the present alarming rate of destruction of transmission systems and installations.

The chief signal and telecommunications engineer of the Ghana Railway Corporation, Dr Y. (Divarders), who also spoke, said the corporation is being provided on the western line with the most up-to-date communications system incorporating the latest strength in telecommunications' technology, and harnessing of solar power. He said the communications of the Ghana Railway will therefore be among the foremost in the developing world.

The function was chaired by the director general of the GBC, Mr Fifi Hesse. He was optimistic about the future for telecommunications expansion in Ghana. Mr Fifi Hesse said the provision of telecommunications facilities is, however, capital-intensive, and requires aid from multinational agencies and donor countries.

/9604

CSO: 5500/73

SENEGAL

FRANCE TO FINANCE NEW RADIO-TV TRANSMITTER

Dakar LE SOLEIL in French 7 Apr 86 p 10

[Text] Senegal's Radio and TV Broadcastint Office (ORTS) will soon be getting a new 10-kilowatt transmitter. Within about 2 months, it will be installed at Ziguinchor to allow the national system to provide full coverage to the region formerly known as the Casamabce, to Gambia, and to the southern portion of eastern Senegal.

The transmitter will cost 335 million CFA francs, 275 million of which France will provide, with the remaining 60 million coming as Senegal's share. The financial agreement covering the acquisition was signed on Thursday afternoon in Dakar by Senegal's communications minister, Djibo Ka, and by France's ambassador to Senegal, Claude Harel.

At the signing ceremony, Djibo Ka praised this "important contribution from France, which will, he said "give renewed momentum" to ORTS, and cited its "essential role in the implementation of national policy in the communications area and in that of increasing awareness of changing attitudes."

Claude Harel dwelt on the importance his country attaches to "so vital a factor as communications" and cited the excellent relations that have prevailed between Teledifusion de France (TDF) and the ORTS in areas as disparate as technical training, maintenance and improvements to the networks, etc.

In this connection, he announced that 20 cable TV receivers will be installed in community centers in the Ziguinchor, Thies, and Dakar areas, so as to enable villagers to gain a fuller understanding of what is going on throughout the nation.

These reception centers will cost 300 million CFA francs, and at least some of them will be solar powered. With financing from France, they will be a continuation of the Deny Biram Ndao experiment that began in Dakar in 1984.

6182/9738
CSO: 5500/70

TANZANIA

BRIEFS

RADIO TANZANIA INAUGURATES NEW TRANSMITTER--Dar Es Salaam: Radio Tanzania will tomorrow inaugurate its new 20kw transmitter. The medium wave transmitter will replace the one installed in 1956 and marks the completion of the first phase of rehabilitating Radio Tanzania's equipment. The transmitter, located behind broadcasting house on Pugu Road, was manufactured in Yugoslavia and cost nearly 4.6 billion shillings. In the expansion of its broadcasting network, Radio Tanzania will launch the second phase of rehabilitating its equipment immediately after it acquires foreign exchange. The second phase includes the buying of a similar transmitter. A tender for the transmitter has already been awarded to a Swiss company, which will buy and install it at a cost of 1.7 billion U.S. dollars. [Text] [Dar Es Salaam Domestic Service in Swahili 1700 GMT 11 May 86 LD] /12712

CSO: 5500/72

ZAMBIA

BRIEFS

FIRM WINS EARTH STATION CONTRACT--Montreal, (Canada)--The Canadian company Spar Aerospace said here on Thursday that it had won a 7.5 million U.S. dollar contract to build a satellite earth station near Lusaka. The contract will be 90 percent funded by the Canadian International Development Agency. Zambia will pay a further 750,000 dollars for the associated buildings. Spar Aerospace, which developed the articulated arm for the U.S. space shuttle, will train Zambian engineers and technicians in its factories, the firm said. Late last year the Canadian government said it would grant the Southern African Development Co-ordination Conference [SADCC] 13.93 million Canadian dollars for the Mwebeshi II Earth Station. The money would be used to construct a second antenna facing the Atlantic Ocean. The existing one faces the Indian Ocean. [Text] [Lusaka ZAMBIA DAILY MAIL in English 25 Apr 86 p 1] /9274

CSO: 5500/73

EUROPEAN AFFAIRS

MANY POLITICAL, FINANCIAL PROBLEMS REMAIN FOR NORDICS' TELE-X

Helsinki HUFVUDSTADSBLADET in Swedish 18 Mar 86 p 9

[Erik Wahlstrom: "Launching Tele-X Was Simple, Using It Is More Difficult"]

[Text] In July 1987 an Ariane booster rocket will be launched from a base in French Guyana and place a Nordic communications satellite in stationary orbit 5 degrees east of Greenwich and 36,000 kilometers right above the equator.

It will circle the earth with the speed of the earth's rotation and will therefore be kept stationary over the same spot all the time.

The satellite is called Tele-X.

That much is easy to predict about the satellite, and also that it will link data between companies in the Nordic region.

But whether it will also transmit television programs to viewers in the Nordic region is totally impossible to predict today.

Abominable Statistics

That matter depends on political decisions. The game statistics of the politicians in this field have been abominable so far. For decades they have discussed which would be the very, very best cultural policy alternative for Nordic television cooperation in the satellite age.

They have resolutely rejected all proposals for any next best alternatives.

The result today is that the very worst cultural policy alternative--Sky Channel--is visible all over the Nordic area, without any joint Nordic competition of either the best or the next best kind.

Pro-Tele-X

Tele-X was discussed at a seminar at the State Technical Research Institute in Otnas yesterday. It was a strongly pro-Tele-X seminar.

Tele-X is a project for companies which are high-tech or want to become so. In Finland there are three companies which primarily participate in supplying technology to Tele-X, namely Nokia, Valmet and Teleste. The State Technical Research Institute is also involved.

Can Do a Great Deal

Tele-Z can do a great deal. It can transmit data at a top speed of 34 megabits per second, even if normal computer communication takes place at considerably lower speeds, such as 2 megabits or 64 kilobits per second.

Per Zetterquist from the Swedish Space Company said that he thinks it is in communication between computers that Tele-X will be most successful.

"We compete primarily with all the small messenger cars that are driving around today with computer tapes between offices," Zetterquist said.

Companies can also set up television conferences between up to four parties via Tele-X.

Other forms of office services, remote printing of newspapers and educational television are also potential areas of application for Tele-X.

But all of this is of less interest to the electronics industry as a whole.

Most important is that Tele-X will provide it with an opportunity to learn, to get a foot in the door to a highly technological industry and hopefully lead to spin offs of various kinds in the future.

"We do not anticipate making a profit from Tele-X, at least at this stage," said the representative of the Telset company. "We participate for other reasons."

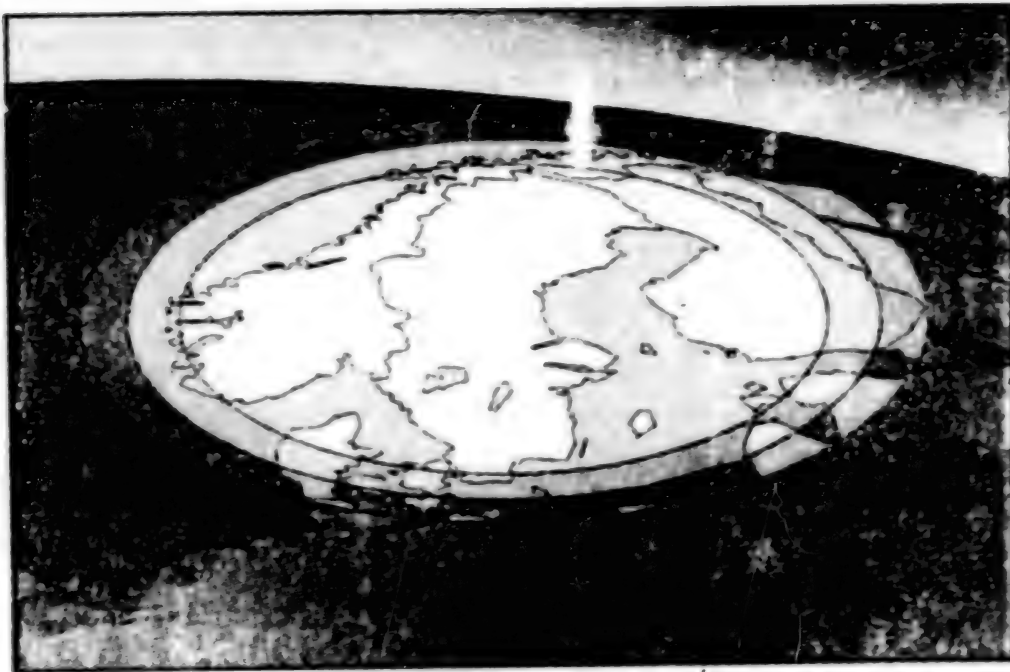
What Are We Going to Use it for?

Now that industry is launching that tin can into space for its own egotistical reasons, it could of course also be used for television-cultural purposes, if anyone should happen to be interested in such things.

The opportunity for television transmission is also good for Tele-X's image, since it gives the satellite an idealistic touch of public service channel, which justifies the investment of public funds in it by the Nordic nations.

Welcome Technology

The satellite technology as such is very welcome from the aspect of cultural policy. Satellite transmission of television is much cheaper than ground-based transmission. In principle it covers every household within an entire area at reasonable cost.



This is what the Nordic region would look like to an astronaut straddling the Tele-X satellite, 36,000 kilometers above the equator.

The aspect of complete coverage is very important. It is unacceptable for a responsible politician to decide on a system which distributes programs only to the most densely populated parts of the countries. The sparsely populated fringe areas must also get television; the Norwegians, for example, are very anxious that workers on oil rigs should have television service, but in accordance with a well-known law of nature it is the last percent that costs the most to reach.

Why Tele-X?

Why, then, would the Nordic states choose Tele-X over some other satellite that is available, or will be available within a near future?

Because, the Tele-X people say, their satellite has great transmission power which enables consumers to receive a signal with a relatively small antenna. Even in the outermost fringe areas it need never exceed a diameter greater than 90 cm. This means that individual households can mount antennas on their own roofs.

"The Tele-X satellite becomes relatively heavy and expensive because of this," Zetterquist says, "but the total costs for everything, including ground-based systems, will be favorable."

(The brains of the ground-based systems, the Tele-X control center, will be built—with vital cooperation from Nokia—in Kiruna. The Swedish government has chosen to concentrate all space companies in this northern city, partly for reasons of regional policy, and partly because it is easier to spy on the Soviet military installations on the Kola peninsula from there.)

"Not even Tele-X can be received everywhere in the Nordic region, however," says Karl-Erik Eriksson from Notelsat, the Swedish and Norwegian telecommunications agencies' company behind the satellite. The angle between the satellite over the equator and northernmost Norway becomes so small that the walls of the mountains shadow it. There the signal must be received at the top of the mountains and distributed to the households in some ground-based manner.

This does not alter the general decentralization-friendly profile of Tele-X, however.

Light Satellites

Tele-X's competitors Intelsat and ECS are constructed according to another system. The transmission power of the satellites is relatively low, which makes them cheap and light but results in higher expense for receiving their signals on the earth's surface.

"Tele-X's ground stations are about 10 times cheaper than Intelsat's and ECS's," says laboratory chief Veli Santomaa from the Telecommunications Technology Laboratory of the State Technical Research Center.

The fact that Tele-X can be received directly by individual households gives it a cultural-political advantage. If a satellite requires expensive central antennas, it means that the programs must be further distributed to the households by some ground-based means, and that is not possible in sparsely populated regions, whose equality with the densely populated locations is what all of the political parties say they want to promote.

No Dialog

But Kaj-Peter Mattsson, who is a consulting civil servant at the Traffic Ministry, noted that no dialog whatever has occurred between the industry and cultural politicians regarding Tele-X.

Right now the Nordic television companies are pondering how they can conceivably use the two channels offered by Tele-X. One might be of initial use for handling news and current affairs programs, while the other will

include sports, entertainment and culture. The preliminary study by the companies will be finished in April.

After an introductory 3-year trial period, the nations would then take a stand on whether there is reason to continue Tele-X or not. In general, both opponents and advocates believe that there can be no question of planning and implementing Tele-X for only 3 years and then scrapping the whole thing.

Where Get the Money?

"The problem is that this requires money," Mattsson said. Just translating the programs whose importance is strongly emphasized by Finland is believed to cost about 84 million Swedish kronor annually.

"The questions of origin are also very complicated and require negotiations," Mattsson said. Actual negotiations can only get under way after a definite decision to realize Tele-X, but discussions have already been initiated between the originating organizations and the radio companies. This will also become a costly item in the budget.

In general it will not be technology but program activity and content which will cost money, which is only the way it should be.

Unacceptable Alternatives

Then how will Tele-X be financed?

Mattsson recounted all the alternatives, which are all equally unacceptable to a responsible politician: raising telecommunications fees, allocating budget funds (these alternatives are just as revolting to the other Nordic countries as they are to Finland), or allowing advertising (unacceptable to Sweden) or some form of pay television.

Santomaa said that it is likely there will be 90-180 television channels in Europe around 1995, for which the problem will be to find sufficient programs to fill them with.

And Mattsson noted that Tele-X is in a totally different media situation compared to the one that prevailed when it was first discussed at the beginning of this decade.

"There is tough competition between various program producers," he said. Furthermore, Tele-X does compete only with producers outside the Nordic region but also with the Nordic telecommunications agencies' Nordprog (if it is realized). And within the individual Nordic countries there are regional projects which are competing.

The most current example of this is the Finnish television channel 3.

11949

CSO: 3650/190

EUROPEAN AFFAIRS

EEC DISCUSSES LOWERING INTRA-EUROPEAN TV BARRIERS

Paris LA TRIBUNE DE L'ECONOMIE in French 20 Mar 86 p 13

[Article by M.P., Correspondent in Brussels: "The Commission wants to Create European TV"]

[Text] On 19 March the European Commission launched a debate that is expected to be long and lively by proposing an EEC directive for the creation of a true "common market for television."

At a time when technical progress--cable distribution, direct satellite broadcasting, etc.--is breaking down national boundaries in the audiovisual field, the executive committee of the Commission considered it necessary to propose common regulations setting down the basic principle that "in the future nothing shall legally or administratively prevent broadcasts produced legally in one EEC country from being received in all the other member countries."

In order to assure this broadcasting freedom at the Community level, the Commission is recommending adoption of a certain number of criteria that will simultaneously eliminate the reasons generally advanced by national authorities for refusing "importation" of programs made beyond their frontiers, promote a certain degree of quality in the programs broadcasted and finally, protect a certain form of European cultural identity.

Thus, the directive includes a minimal advertising "code" prohibiting any promotion of tobacco consumption and limiting that of alcohol. Likewise, while each nation is free to set a ceiling on the volume of broadcast advertising, none may refuse a foreign broadcast incorporating no more than 15 percent advertising.

This figure of 15 percent, which was set only after very long deliberations, will probably be disputed not only by Denmark and Belgium, which do not allow advertising on their national networks, but also by France, which has set no limit for the fifth and sixth networks, by Luxembourg because RTL [Luxembourg Radio Television] and RTL Plus are in the same situation, by Italy because Euro TV can reach 22.3 percent, and by FRG, where nine states have set the limit at 20 percent.

As for program content, the directive insists that preference be given to Community productions. For starters it suggests at least 30 percent, excluding news programs, sports, and advertising, should respect that formula. Later, the percentage would be raised to 60 percent, a figure that reflects current reality in the EEC but that the Commission obviously fears will be demolished by the "newcomers" tempted to "carry out their activities at very low costs on the basis of programing made up of advertising, popular series and serials supplied at dumping prices by third countries."

In addition, TV stations would also have to devote 5 percent of their budget to the acquisition of programs offered by independent producers. Of course, this "traffic" of broadcasts across national boundaries would be facilitated by adequate Community provisions in the areas of copyright protection and payment of royalties.

In this spirit, the commission also wants to encourage the development of European networks and the broadcasting of programs to all of the 320 million citizens of the EEC. Prior to the outbreak of the EEC budget crisis, funding of approximately 13 million French francs was provided for Europa/TV, a television channel based in the Netherlands that broadcasts by satellite multilingual programs produced by a consortium composed of ARD (FRG), NOS (Holland), RAI (Italy), RTE (Ireland), and RTP (Portugal).

Other projects could benefit from similar financial aid, particularly those of Mr Berlusconi and Mr Seydoux, and from FR3. In regard to the latter network, Ripa Di Meana, the European commissioner in charge, drew attention to a letter from Mr Langlois and it is believed that a meeting is planned for early April in Brussels.

"High Definition" Battle

The Community is going to throw all its weight behind the battle being carried out by European industries to impose their "high definition" television standard in the face of a project developed by NHK, the most powerful Japanese television network.

The EEC Commission announced on 19 March that, during a meeting held at its initiative 2 days earlier in Brussels with industry representatives (Thomson, Philips, Bosch, Thorn/EMI), national administrations and those responsible for European radio broadcasting had decided upon a precise working program that will be submitted to the International Radio Broadcasting Consultative Committee next May.

It will be a matter of developing a world standard of European origin with the possibility of having equipment on the market at the end of the decade.

The Commission has announced that RACE, the Community research program on telecommunications, would contribute actively to this project and that the industries were preparing a Eureka project that could be launched this summer.

In industrial and financial terms, the importance of this battle for television in the year 2000 is considerable. It is sufficient to recall that the Japanese standard, received rather favorably by Latin American and Asian countries as well as by the American network CBS, is not compatible with present equipment. If it were selected, all TV equipment would have to be renovated from top to bottom.

9969/12947

CSO: 5500/2642

FEDERAL REPUBLIC OF GERMANY

BANGEMANN PROPOSES PARTIAL LIBERALIZATION OF BUNDESPOST

Munich SUEDEUTSCHE ZEITUNG in German 12 Mar 86 p 33

[Article by editorial staff: "Bangemann: Also Think About Private Enterprise With Regard to the Postal Service"]

[Text] Hanover(LU)--On Tuesday evening in Hanover, Martin Bangemann, the Minister of the Economy, urged more private initiative and a reduction of state influence. In his opinion even the state-owned monopoly, the Deutsche Bundespost, ought to be cut back. At the opening of the CeBit trade fair, which is dedicated to information science and communications products, this politician emphasized that the attitude of the people toward new technologies is different today than it was just a few years ago. "Absolute rejection has turned into varying degrees of acceptance," he said. Bangemann voiced opposition to direct support for companies. At the same time, however, negative social consequences would have to be alleviated by means of ancillary measures. Helmut Lohr, president of the Central Union of the Electrical Industry (ZVEI), also agreed with him. He pointed out that for the first time an economic upswing was put in motion by a "technological leap."

In his opening speech Bangemann opposed the role of the state as the "driving force" behind new technologies. Rather, he said, private companies must be given more latitude. The minister sees not yet exhausted potential for this in the area of telecommunications. In his view, the installation and operation of telecommunications networks must remain an obligation of the state in order to ensure service to the entire country. With regard to all other activities of the Bundespost this was not the case, he said, and thus it was questionable whether the Bundespost ought to be a supplier of terminal equipment at all.

From the same perspective Bangemann spoke out against direct support for research with public funds. Moreover, he said, the state must restrain itself with regard to introducing and disseminating new information products. The economic sector was much more knowledgeable about that situation. Assistance to individual firms in terms of mobility and adjustments ought to take the place of subsidies to maintain industries which are falling behind competitively. This would make unavoidable structural change more socially compatible.

The new technologies alter not only the professional expertise necessary but frequently also the social work environment, he said. This makes it more difficult to take on a job again after a lay-off. In Bangemann's opinion the state could help out here with specific "reentry training" following an education-related interruption in one's occupation for example.

Opportunities for Part-Time Work

According to Bangemann the new technologies provide new opportunities in terms of lifestyle. Work time is becoming less and less dependent on plant operating time. Bangemann appealed to companies and employees' councils to make use of opportunities for part-time employment and job sharing. Social structures would have to be adapted to broadened technical opportunities so that the advantages of the current period of change could be fully developed. The cooperation of the employees' councils in making the necessary adjustments was looked on very favorably. A greater say in management, on the other hand, was not considered necessary in Bangemann's view.

Technical change, as the economics minister emphasized, cannot be halted. It would be better, he said, to actively help structure it. Therefore, what is needed is not only an informed society but also an "innovative society" in which new ideas are tried and the courage to take risks is also rewarded.

The new technologies give the current economic upswing a "technical quality" not seen in economic cycles up to now. If the forces driving the economy upward should weaken, and the first indications are apparent in exports, the seeds of a new kind of positive development will grow out of the renewal of technical structures. The economy would follow a path of more steady growth. President Lohr of the ZVEI brought up these subjects at the opening of CeBit --that progress in productivity is the central factor in terms of the stability of current growth and that microelectronics is involved in it to a large extent.

In order for there to be future opportunities, still more must be done in terms of research, development and innovation, he said. It is not a question of supporting each and every idea that comes along but of setting clear priorities. More stringent guidelines must be set in selecting them. Product-specific research is a matter of private responsibility.

For the German information science and communications industry, the acquisition of an ISDN system is the focal point of concerns regarding development and sales. The FRG has an advantage in this respect which must be secured. International standardization is urgently needed. We cannot be content, either with being incompatible or with subjugating ourselves to the interface strategy of market leader IBM.

12552

CSO: 5500/2657

FEDERAL REPUBLIC OF GERMANY

SCHWARZ-SCHILLING LAUNCHES NEW BERLIN COMMUNICATIONS SYSTEM

Duesseldorf HANDELSBLATT in German 16 April 86 p 4

[Unattributed article: "Standardization Should Be Promoted"]

[Text] HANDELSBLATT, Berlin, Tuesday, 15 Apr 1986 (AS)--
Federal Postal Minister Schwarz-Schilling described the
Berlin communications system--called BERKOM for short--which
the Deutsche Bundespost in conjunction with the Berlin Senate
has now given the official go-ahead, as entering into a com-
pletely new dimension in terms of providing and processing
information. This pilot project, unique in the world, is in-
tended to pave the way for telecommunications into the next
century.

In addition to the development of telecommunications services and terminal
equipment, BERKOM, as Schwarz-Schilling explained in Berlin, will also provide
substantial encouragement for innovation in further developments in informa-
tion science and information technology. Against the backdrop of the general-
ly expected sharp decline in costs in glass fiber technology and optoelectron-
ics, the introduction of the TV-telephone, for example, is also no longer a
utopian concept with regard to purchasing power by the private sector.

One main goal of BERKOM, in addition, is to promote the standardization of new
services. As yet, says the postal minister, there are scarcely any interna-
tional standards; the initial stages of development of equipment and systems
are just now being seen. Thus, BERKOM has a big opportunity to influence the
nature of this process and to accelerate it, i.e. to make an important contri-
bution toward standardized developments. "I consider this point extremely
important," said Schwarz-Schilling, "because only by introducing standardized
telecommunications services can we ensure that the new communications poten-
tial can be used not just by a small number of users but by all users with
corresponding communications requirements." Only in this way can competition
in the terminal equipment market be achieved, because internationally stan-
dardized services set the stage for open markets.

A special project management team for implementing BERKOM was set up by
DETECON (Deutsche Telepost Consulting GmbH) under the auspices of the Deutsche
Bundespost and with the assistance of the land of Berlin. Initially, this

project management team is to prepare the overall developmental framework, award contracts for performance of the various parts of the project and supervise their completion. The construction of a new telecommunications network for personal communications requires substantial up-front investments, emphasized Schwarz-Schilling, because the network would have to be of a certain minimum size before it could be used.

A special glass-fiber network is being established for BERKOM as the testing and prototype network for the future glass-fiber broadband network. The overall project, which, according to the current level of planning, is expected to be concluded in 1989, is valued by Schwarz-Schilling at DM 100 billion.

Berlin's senator of science, Mr. Kewenig, also sees in BERKOM an opportunity for Berlin to test prototype developments with an eye to practical applications. Lastly, the expansion and reinforcement of the entire communications sector is of particular importance to the city, says the economics senator, Elmar Pieroth. After all, as early as 1985 Berlin had an employment potential of 15,000 people in this area.

12552

CSO: 5500/2647

FRANCE

FRENCH CABLE PLAN FOR OPTICAL FIBERS QUESTIONED

Paris ZERO UN INFORMATIQUE in French 17 Feb 86 p 6

[Article signed by C. P.: "The All Optical Fiber Network Questioned": first paragraph is ZERO UN INFORMATIQUE HEBDO introduction]

[Text] The optical fibers wiring of Montpellier is running somewhat behind schedule. The problems that have arisen are reportedly not just technical.

Louis Mexandeau, who on 6 February 1986 officially inaugurated the optical fiber videocommunications network in Montpellier, insisted on stressing that "the cable plan has become an industrial and commercial reality."

Remember that this plan, defined in 1982, deliberately opted for optical fiber. Thus, "47 memoranda of understanding authorizing studies involving 4.7 million households were signed, followed by 16 general agreements which authorize the deals necessary to wire 2 million homes."

Another piece of information from the PTT [Post, Telephone, and Telegraph] minister: "So far almost 900,000 jacks have been ordered and another 250,000 optical fiber units should be ordered within a month," which will bring the "total to more than 1.1 million jacks (footnote 1) (The order rate should reach 250,000 jacks per trimester. By the end of the year the 2 million mark should be passed.), equally divided between optical fiber and coaxial cable technologies." That was what was said without further clarification. It would be easier to understand in light of a confidential note questioning the "all optical fiber" choice which was sent on 21 January by Francois Gerin, "videocommunications representative (or more simply our national "Mr Cable"), to Jacques Dondoux, general manager of the telecommunications program, and published by our associates at LE POINT.

The reasons? High cost (this technology turned out to be four times more expensive than copper coaxial cable) and delivery deadlines which are generally not met. This offers faint hopes for export.

Conclusion: It therefore seems "premature to order new jacks without being sure that the first mass-produced networks are working well."

Therefore, a division between optical fibers and coaxial cable would be the only way "to ensure the technical and industrial success of the cable plan." Rather annoying; for towns which have opted for "all optical fiber" like Montpellier!

Following Biarritz' example, the Languedoc city of Montpellier was proud to be the "world's first city to be uniformly wired commercially." A typical, average French city (with 200,000 inhabitants or 85,000 homes to be "hooked up," in other words, able to subscribe to the network if they want), Montpellier was to be a "showcase for export," according to its Deputy Mayor Georges Freche. The Deputy Mayor wanted to get clear answers from the minister to two major questions: First: "Will the network be operational in June in time for the two scheduled events (the second "Mediaville," a forum on videocommunications, local television, and cable networks, and an international congress of French-language television networks)?" Second: "Will it be possible to start commercial operations in September?"

As far as the delays on the technical level are concerned, "the Velec-CGCT [General Company for Telephone Engineering] is generally to be blamed," indicates G. Freche, who also points out that he obtained commitments from the DGT [General Directorate of Telecommunications] to wire the whole city by the end of 1988, i.e., within 3 years. Having learned that Jacques Dondoux is now proposing an "installation plan stretching out until 1991," he did not hesitate to declare that this was certainly a "sabotage of French industry.... If wiring is stretched out over 5 or 6 years, that means that the Japanese and the Americans will be allowed to pass us in an area where for once they are behind us!"

He adds accusingly that for the last 2 years the DGT has not given the DRT [Regional Directorate of Telecommunications] sufficient resources to meet its deadlines.

Louis Mexandeau answers: that "In order to permit action on all the additional orders we are sure to face, I have instructed the general director of telecommunications to reinforce the DRT's regional services in the Languedoc-Roussillon department." This means primarily reinforcement of personnel, equipment, and research units.

In addition, the minister reassured George Freche by responding positively to his two questions. On the one hand, he assured him that the network will be operational in June and, on the other, that the whole city will be covered by the end of 1989. This would mean a 1-year delay which the mayor has accepted.

On the basis, 55,000 jacks remain to be negotiated, because during the last 2 years the DGT "has never submitted any cable plan beyond that for the first 30,000 jacks"

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CSO: 5500/A013

FRANCE

CNET LABS DEVELOPING NEW TECHNOLOGIES, APPLICATIONS

Paris ZERO UN INFORMATIQUE in French 24 Mar 86 pp 62-63

[Article by Eric Sorlet]

[Excerpts] It has become difficult at times to separate telecommunications from data processing. The transfer of government data processing activities to the DGT is proof enough of this. Fulfilling the dual function of research center and technical center of the DGT, the National Center for Telecommunications Research (CNET) has linked these two technologies for a long time.

The CNET is also known for its activities in the field of components, ranging from the reliability of electronic components to technological operations at Lannion, for its research and development in the area of silicon integrated circuits at the Norbert Segard Center in Grenoble and for its research on III-V compounds (gallium arsenide and indium phosphide) at Bagneux. In fact, the increasingly important role played by electronic components and now optical-electronic components in telecommunications equipment has led the CNET to become involved in this area and move beyond the strict domain of telecommunications. Research on data processing itself has already been going on for a long time at CNET. Although it is evident that the CNET has to use powerful data processing tools in its research, whether they be general purpose computation centers or specialized minicomputers, people do not generally know that it is now involved in doing basic research in certain branches of data processing and its applications.

The CNET Must Conduct Basic Research to Fulfill its Primary Missions

Data processing cannot in fact be separated from the center's other activities, even if account is taken of the fact that research on data processing by itself directly occupies some 300 engineers and technicians out of the 2,800 employees engaged in research. Research, however, is still oriented solely on the basis of telecommunications needs, even if its impact goes way beyond this area alone. Research is conducted in order to have the necessary tools and to master data processing technology, whether it be in the field of systems design, software, artificial intelligence or man-machine dialogue.

The example of the SM-90 is significant of this process. For a long time, CNET's Paris-A center has been doing important work designing technical management hardware to monitor operations of the equipment of the telecommunications network. These different "operations devices" were developed around the same "average modular intelligent core" common to all machines, first done for wired logic circuits and then for programmed logic.

The last generation of these machines, in the form of a multiprocessor structure specially adapted to the "real time" problems posed by this type of user, was christened the SM-90, since it took over from the preceding SM-80 family.

Thanks to the assistance of Inria, which has been more or less associated with the project since its start, the SM-90 was enriched with a variety of software which opened it up to new areas of use. Today, the license to build this machine has been transferred to six manufacturers: four that use application systems as a core (CSEE, ESD, Thomson and TRT); Telmat, which markets it in OEM; and, Bull, that manufactures it under the name of SPS7.

This machine still has extensive possibilities for further development: equipped today with 16-bit microprocessors, its 32-bit internal structure will enable it to use 32-bit microprocessors when they come out and thus to increase its power.

The SM-90 is used extensively at CNET to develop other projects. The Concerto software center is an example. Mastery of writing computer programs, an more importantly mastery of operating them, during the life of an automatic switching system is a growing concern. This is what led the Lannion center to launch a "CNET project" for a programming workshop to participate in research on both industrial and material solutions to this problem.

The work station is a structure that enables several users working at the same time to have a unique dialogue mode without having to worry about syntactical constraints in keying different documents. These principles can of course be applied outside the strict domain of telecommunications software.

Advances to be made in solving numerous problems for telecommunications, ranging from speech recognition in the case of multiple speakers, the CAO or how to localize breakdowns, are largely linked to the use of expert systems and recourse to artificial intelligence technology. Thus a number of studies are being conducted in this area at CNET.

Among other projects are the work going on at the Paris-A center on the Prolog programming language and the development by the Lannion center of the Metalislog system designed to correct certain shortcomings of Prolog, such as controlling the deduction process in logic programming.

Based on the Metalog model designed at CERT in Toulouse and introduced in Prolog, the system offers general problem-solving strategies which are more elaborate than Prolog's and, more importantly, it affords the user the possibility of working out his own strategies.

However, in the field of artificial intelligence, the best accomplishment is probably MAIA (machine for IA applications), a joint CNET-CGE project being developed in the laboratories of the Lannion center and the Marcoussis CGE.

Other artificial intelligence technology is applied at CNET in the area of recognition of continuous speech, with SERAC (Expert Acoustical and Phonetic Recognition System). The purpose of this research is to formalize the knowledge currently existing in Keal (a speech recognition system of the TSS division) and to provide ways to maintain and improve this knowledge.

Among other basic research projects in data processing are architectural studies on data processing systems, and particularly distribution and evolutive architecture with the development of the Galaxie operations system, and development of several software devices to aid in specification and validation of software such as the Oasis and Veda systems.

Data Processing Applications Employ some 200 Engineers

Besides basic research, the CNET also does a great deal of work in the field of data processing applications, ranging from signal processing for speech or image synthesis, to computer-assisted design or definition of communication symbols. Two outstanding achievements should be mentioned out of this applied research which today employs some 200 technical engineers.

In the field of creation and visualization of synthesized images, which is one of the specialities of the CCETT at Rennes, a joint CNET-TDF center, research has led to development of a first generation of equipment for production in real time of animated synthesized images which are two dimensional and in color.

Christened the Cubi 7, this modular system makes it possible to create and visualize these images on the basis of data bases and acquisition devices managed by a host computer (for instance SM-90) to which it is connected and in relation to which it is a heavy peripheral. Cubi 7, an independent work station enabling production costs to be divided by 5, is in the form of an image memory with specialized processors, and microprocessors in sections.

The algorithm eliminating the 3D hidden parts is wired, which represents a considerable gain for the family of images: less than one second for a series of 2,000 polygons as compared to 15 minutes on a 32-bit mini operating at 1 Mips. The system is supposed to receive the Cristal module designed to speed up computation of images at a very high level of realism for the "beam throwing" method. A multimode operation is also to be included. Transfer of know-how has already been completed with Telmat for the hardware, and with Sesa and Cap Sogeti for the software.

This brief summary clearly shows the importance attached to data processing by CNET and illustrates the growing synergy between telecommunications and data processing. The various research projects also reflect CNET's ambition to play a federative role in government research, to facilitate its transfer to industry.

ICELAND

NATIONAL COMPUTER DATA NETWORK BEGINNING OPERATION

Reykjavik FRJALS VERSLUN in Icelandic No 2, 86 pp 41-3

[Article: "Increased Possibilities for Computer Communications"]

[Text] A public computer network or public data transmission network, as it is now called, has been in experimental use by the Icelandic Post and Telegraph Office. It is planned that the system will be put into general use around 1 April. The public data transmission network is similar to the Icelandic telephone system except that computers with their displays and printers replace the telephone equipment and that people will use the data transmission network in another way. Thorvardur Jonsson, chief engineer of the Icelandic Post and Telegraph Office reported on the major aspects of a data transmission network as given below.

New Possibilities

There will be new possibilities for companies and individuals desirous of communicating with others with computers through the data transmission network and many areas will be involved. The Icelandic Post and Telegraph office offered to participate in a common nordic data transmission network in 1979. Connection was established with 70 companies and it was offered to keep them abreast of developments and reports were made to their representatives about what was planned. These were representatives of banks, import companies, research institutes and some kinds of service companies, likewise power and communications companies. The interest of these companies was not such for the Icelandic Post and Telegraph Office to establish connections with other nordic countries. Only two or three companies showed interest. The nordic countries, on the other hand, built up their system at that time.

Some time later representatives of four large companies established connection with the Icelandic Post and Telegraph Office to consider the matter again. That was during the years 1982 to 1983. Considerations showed that the companies, that is, the Office of Bank Auditors, SKYRR, the Association of

Icelandic Cooperatives and Icelandair, could establish certain connection between themselves which could be beneficial to them. The discussions ended with the Icelandic Post and Telegraph Office offering to set up a public data transmission network and the representatives of the companies were satisfied with this. As a result, employees of the Icelandic Post and Telegraph Office made preparations to establish a public data transmission network in Iceland.

A 'Parcel' Exchange Net

The headquarters of the data transmission network is in Reykjavik with stations at six places in Iceland: Stykkisholmur, Laaffjordur, Blonduos, Aukureyri, Egilastadir and Hvolisvell. In addition to domestic connections, the stations are connected to foreign data transmission networks and data banks situated abroad. Data transmission networks are 'parcel' exchange or line exchange. The Icelandic data transmission network is a 'packet' exchange, which is more common and involves data traveling between computers in the form of information 'packets.' Each information 'packet' contains information about receiver and sender, the number of the 'packet' and necessary control codes. It is possible for many parties to send 'packets' simultaneously along the same line. The primary advantage of a 'packet' exchange system is that it is possible to connect users with varying baud rates and operating systems and thus there are more possibilities for connections.

In a line data exchange system such we planned to offer in 1979, users at both end of the transmission line have to use the same baud rate and operating system.

The Icelandic Post and Telegraph Office requested bids for equipment for the data transmission network and decided after substantial considerations to purchase the LM Ericsson system. A total of 7 parties made bids and this was the lowest bid. The equipment was installed last May and has operated well. During recent months we have worked at the development of billing equipment. We will discuss below in detail the prospects opened by this equipment.

The most common designation of 'packet' exchange data transmission network is the X25. This is the standard name for the prime interface between the net and users. Computer manufacturers must adjust their equipment for each country and thus Hewlett Packard and IBM have adjusted their equipment to the Icelandic X25 system. Other computer manufactures are working to adjust their equipment at this time. When the computers have been accommodated completely the producers will announce that they can be used in Iceland. The connection of conventional personal computers (PCs) and others using the same transmitter with the data transmission network takes place according to three 'X' standards: X3, X28, X29. They can communicate either directly with one another and with X25 users or by choice through the public telephone system to the data transmission network.

A New Connection with the Outside World

The data transmission network headquarters in Reykjavik serves 140 terminals and stations and the stations scattered around Iceland have a total of 160 terminals. There is an administrative center in Reykjavik for the entire system and all management takes place through it. Connections from Reykjavik will be initially through two 9600 baud lines but it is later planned to put into use 64000 baud lines. Connections with areas abroad will be to London and Copenhagen, and later to New York if there is the need. Moreover, through London and Copenhagen connections may be established with practically the entire world. Through London and Copenhagen it will be possible to establish connections with various data bases and to receive special services connected with data services, data communications and storage. Both companies, which often control large computers, can use this new method and individuals with personal computers. All will need a modem to connect with the data transmission network. Both X25 and X28 or three 'X' users will require a modem of the right kind with regard to baud rate and communications protocol to establish connections with the data transmission network.

Public Electronic mail

Some postal managers and individuals abroad are beginning to operate public electronic mail companies. We may mention in this context British Telecom Gold, One-To-One or Easylink in Britain. Such companies offer companies and individuals electronic mail, which, in addition to allowing them to communicate among themselves, provides users with the additional service of being allowed to send a message to telex users. The telex users can answer the message in their own electronic mail message. The user can consult his electronic mail box from time to time to see whether or not he has received a message. We can expect a good deal of use of the data transmission network in the future in connection with electronic mail.

Subscription Cost 12-33,000 Kronar

The subscription fee for the use of the data transmission network is set according to baud rate and is from 12,000 up to 33,000 for an X25 user, and from 1,150 kronar for storage fees, and a subscription of 7,100 to 14,900 kronar for X28 users. There is also a users fee charged and a quarterly fee, also according to baud rate. This is from 8,000 kronar for a baud rate of 2400, 22,700 kronar for X25 users, and from 575 to 6,000 kronar for X28 users. A set fee of 25 aurar is charged for every message and additional charges are based upon how long the system is used and how much data is transmitted. This fee schedule is lower than, for example, the Norwegian fee schedule. Users in Norway must pay nearly 30,000 kronar as a subscription fee and over 12,000 in users fees per quarter. This is in terms of a baud rate of 2400.

Will Telex Disappear?

The establishment of a data transmission networks, in particular those based upon transmission of information 'packets,' will result in a reduction of telex use in the future. Today there are around 1.5 million telex users in the world and it is expected that these numbers will still increase for 5 to 10

years. The major competitor of telex is the so-called teletex. That is a system based upon computers and 2400 baud rate transmissions through a data communications net. This baud rate is 48 times greater than the 50 baud rate of telex. In standards and rules for teletex provision is made for conversion exchanges to be established between the telex net and the data communications systems of each country. This would make code transmissions possible between teletex and telex users.

In Iceland there has recently been a considerable decrease in telex fees and on 1 July, 1984 subscription costs and quarterly users fees fell considerably. On 1 February telex fees to the United States decreased by more than 30 percent and to Canada by around 50 percent. This is in connection with the fact that agreements with the largest nordic telegraph company ran out at the beginning of this year.

It is planned that the telex net will increase until 1990 or 1995 here in Iceland, but later shrink. During the last two years there have been requests by various telex users to allow them to use the conventional computers available in companies for sending telex messages. The Icelandic Post and Telegraph Office is now testing two kinds of equipment which could be installed between the computer and telex systems to make this possible. Later in this year the Icelandic Post and Telegraph Office will bring into Iceland a teleprinter with a hard disk memory and connections to both the computer and telex nets. The telex system will then be able to send to the teleprinter hard disk instruction as to what time the teleprinter should transmit the telex message.

9857

CSO: 5500/2650

ICELAND

TELECOMMUNICATIONS AGENCY BUYING NORWEGIAN AUTOMATED EXCHANGES

Reykjavik MORGUNBLADID in Icelandic 2 Apr 86 p 22

[Article: "Icelandic Post and Telegraph Office Buys individual Telephone Exchanges for 30 Million Kronar"]

[Text] The Icelandic Post and Telegraph Office has proceeded with one of the largest agreements that it has every made with a single company. It involves the purchase of automated individual telephone exchanges. According to this agreement, the Icelandic Post and Telegraph Office will purchase the individual exchanges from Elektrisk Bureau A/S for around 30 million Icelandic kronar next year.

This agreement marks a decided turning point, it says in a press release from the Icelandic Post and Telegraph Office, since through such a large scale purchase the Post and Telegraph Office can offer its customers telephone exchanges at a much lower cost than has previously been the case. Installation delays will also be cut considerably.

The Elektrisk Bureau A/S company is recognized as a producer of telephone equipment and the Icelandic Post and Telegraph Office has had repeated contact with this company since 1932, when the first automatic telephone exchanges were purchased from it.

The private telephone exchanges, the purchase of which has now been agreed upon, have the brand name FOX and come in three sizes, that is, having maximums of 60, 130 and 200 numbers. They can transmit both sound and computer symbols. The exchanges are constructed in units. This means that the exchanges may be customized according to the needs of each customer. The new exchanges are easier to install and maintain and cheaper, it says in the news release.

9857
CSO: 5500/2650

NORWAY

BRIEFS

NORWAY READIES FOR ERS-1--Tromso, 5 April--The Tromso Telemetry Station changed over into a private business establishment at a statutory council meeting yesterday. Parallel with the changeover to business establishment, the station enters a phase of extensive enlargement which will make it possible, among other things, to gather in data from the European satellite ERS-1. The changeover to a private establishment is closely related to the forthcoming enlargement. The data from ERS-1 will be of such great commercial interest that people feel a private, self-supporting establishment will be the best and most flexible organizational form. The new station is being founded by seven cabinet ministries, with the Ministry of Industry in the vanguard. The ERS-1 satellite that will furnish the Tromso station with important data will be launched in 1991. The new data-reading equipment will be installed by that time. Alongside the construction costs, there is talk about investments of 45 million kroner. Today the most interesting areas of application of the data from the Tromso Telemetry Station are maritime positioning, localization of emergency radio beacons, production of geographic material, research, surveillance of resources and marine provinces. Conversion of the Tromso Telemetry Station into a private establishment is one of this spring's three major milestones which will become important for Norway as a space-travel nation. Before the onset of summer, the Parliament will also consider a bill which proposes that Norway become a full-fledged member of the European Space Agency (ESA), and a report on the country's activity in space up until the year 2000 will be submitted to the Parliament. [By Erik Veigard] (Text) [Oslo AFTENPOSTEN in Norwegian 7 Apr 86 p 8] 12327

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10 June 1986

SWEDEN

ERICSSON SEEN PLANNING MEASURES TO IMPROVE PROFIT PICTURE

Stockholm DAGENS NYHETER in Swedish 27 Apr 86 p 12

[Commentary by Sven-Ivan Sundqvist]

[Text] The Ericsson concern is not in a crisis situation, but it is having a hard time. Profit trends have this year come to a standstill at a low level. The management will now have to adopt quite a few measures but will have to carry them through in such a manner as not to eliminate any long-term possibilities of profit growth.

Ericsson's annual report was in the past week sent to approximately 70,000 shareholders. There may be reason to pause and take the pulse of the Ericsson concern via the annual report and via a number of interviews with the management of the concern.

From having been the second-highest evaluated enterprise on the Stockholm Stock Exchange, Ericsson has in the last 2 years dropped to the eighth place (following Volvo, Asea, Electrolux, Saab-Scania, S-E-Banken, Astra and SCA).

Bjorn Svedberg, managing director, has a couple of difficult years behind him and probably a couple of hard years ahead of him. Ericsson has made substantial errors in forecasting and has considerable sources of loss.

Present Situation as Point of Departure

The examination by DAGENS NYHETER of Ericsson's economic situation may be undertaken on the basis of the present situation or with its long-term economic situation as point of departure. We shall start with the present situation. And will, unfortunately, not be able to go beyond that today. We shall have to revert to the long-term possibilities of recovery. According to Ericsson's own ambitious long-term forecasts, when fully recovered, the concern should be able to achieve a profit level of around 3 billion kronor. The present profit level is around 1 billion kronor.

Our point of departure for our profit analysis and profit prognosis is invariably the profits of the different sectors of business of the concern. They provide the needed information. They show the profit picture.

The table included in this article shows Ericsson's own profit calculations for 1985 and DAGENS NYHETER's prognosis for 1986. The column for 1986 gives a falsely precise impression. We might as well include a plus and minus range of 20 percent under each item.

The fact that I, nevertheless, show only one figure will, if anything, have to be interpreted as a measure of accuracy to emphasize the trend of the individual items and the magnitude of the changes.

The Various Items

Now a few comments on the table. We shall examine the items one by one.

1. Public Telecommunications. This is Ericsson's major source of profits, with the AXE exchanges as the mainstay. The margins are pushed downward in 1986. The AXE venture in the United States continues to involve big development costs without any profits on the local-exchange side until 1988, at the earliest. The OPEC countries get less funds for new telephone investments. I believe that the net outcome will be that the profits for this business sector will decline somewhat.

2. Information System. This is the big bleeding wound with 806 million kronor in loss before interest earnings in 1985. Surplus capacity, production problems, delays, severe competition and collapse for Ericsson's personal computers in the United States have affected the profitability level. The management has put a zero financial result as the firsthand goal for 1986. I am somewhat more pessimistic and believe in a loss in 1986 of approximately 100 million kronor.

What may possibly speak for a zero result is the "Sandvik variant," i.e., the fact that Ericsson has depreciated more than was needed in 1985. Last year, therefore, looks much worse than it may have been. If that is the case, Ericsson will get it back in 1986 and in the future. However, the information side is a difficult sector, and I do not believe in God until I see him.

3. Cable Sector. The cable sector, which this year has a turnover of close to 5 billion kronor, consists largely of power cables (40 percent) and telecommunications cables (50 percent). Cables are difficult to perceive as an exciting product. However, the word cable is deceptive. The optic cable--the one needed for the new telecommunications network, simultaneous figures and data, to increase the capacity in existing networks--makes the cable sector a dynamic area. It replaces at an increasingly faster rate the traditional copper cable as telecommunications cable.

The annual report does not show in figures the share in total cable sales of the optic cable. It is therefore somewhat difficult to determine its significance.

The turnover of the optic cable in the United States increased sharply in 1985. The optic cable may in total account for approximately 30 percent of the U.S. turnover, which, in turn, accounts for approximately one third of the entire cable sales of the concern.

Signals from Ericsson indicate that the significant increase in results in 1985 within the cable sector has resulted in a profit level which may be maintained in 1986.

4. Radio Communications. This business sector is specializing increasingly in mobile telephone systems. successful orders are put in flow-line production. The other week in Los Angeles. Now in a total of 22 countries. Here the same comment applies as under cables. It should be possible to maintain the profit level in 1986.

5. Other Business Sectors. Here are four business sectors without any spectacular changes in profit levels, except for the last "waste item." Since several of these other activities were eliminated in 1985, we put a zero result for this item.

6. Line 6 in the profit table adds the real earnings and deducts what, by definition, becomes the joint costs of the concern. Here I project a lower level of real profits and the same level for joint costs of the concern in 1986.

Lower in 1986

Our review thus gives a profit result before net interest earnings of roughly 2 billion kronor for 1986.

The finance net amount later reduces the total result considerably. Interest costs should in 1986 become somewhat lower than in 1985 since interest levels, of course, are declining all over the world. Perhaps less 900 million kronor in 1986.

Profit shares. This item comprises Ericsson's shares in companies where Ericsson has big interests but no voting majority. The most important profit shares are:

<u>Country</u>	<u>Percentage of Share Capital</u>
Brazil	59
Mexico Cable	39
Thorn Great Britain	49

The shares in the profit results in 1985 dropped toward 100 million kronor, primarily because of the deterioration in the situation in Brazil (where Ericsson has a voting share of 26 percent). The profits from these shares in the profit results ought to increase somewhat in 1986. We project 70 million kronor in total.

Minority Shares. Here we encounter a major negative change for 1986 compared with 1985. Minority shares mean that there are a number of subsidiaries where Ericsson owns upwards of 50 percent but not 100 percent. The share of the minority interests in the profits of the subsidiaries will, of course, have to be deducted from the total profit result of the various sectors of the

concern (items 1 to 5 in table), seeing that these results include 100 percent of the profits of the not fully owned subsidiaries.

But how is it then possible for the minority item for 1985 to show plus 159 million kronor? This ought presumably to be a minus? The reason is that the subsidiary, Ericsson, Inc. in the United States which, in 1985, was not fully owned, had a loss in 1985 of 700 million kronor. These 700 million kronor have for 100 percent "affected" the result of the business sectors of the concern under items No. 1 to 5. But since the American enterprise Atlantic Richfield owned 50 percent of Ericsson, Inc. in 1985, 50 percent of the loss of Ericsson Inc. is included as a plus item under the minority item.

Moderately Better

Subsequently, other "usual" minority shares of 191 million kronor are deducted, so that the net profits for 1985 of all minorities becomes + 159 million kronor.

The changes in the ownership in the United States as of 1986 are thus reflected negatively under the minority item for 1986 by the amount of 359 million kronor if my prognosis is fulfilled.

This brings us to the last item. If all of the figures are added up for 1986, this year becomes moderately better than 1985. In other words, it becomes a weak result, just under 1 billion kronor. It should, however, be noted that the only thing I do not know for certain about 1986 is that the profit result will not be just 970 million kronor.

The next time we shall have the occasion to examine the prognosis figures will be after the publication on 28 August of the semiannual report.

Ericsson on Ericsson

Self-criticism

1. The capital accumulation is still unsatisfactory and in 1986 priority is given to the efforts to reduce the working capital to an acceptable level.
2. Correcting the problems which arose in the course of 1984 thus became a more complex task and required more resources than we had reason to expect 12 months ago.
3. The adjustment of the AXE system to American requirements and standards takes longer than estimated.
4. The vision of "the office of the future" which guided the sector proved more remote than many believed.
5. It had a particularly negative effect on Ericsson when problems of development and production within important production areas, such as office

switchboards MD110, Ericsson's personal computers and advanced banking systems, caused enormous delivery delays.

Self-praise

1. Our strong competitive position within the area of AXE was evident in the course of the year, enabling us to sign a prestigious and comprehensive contract with British Telecom.
2. The AXE system has considerable strength in its modular structure and its unique possibilities of adaptation to new telecommunications services.
3. All of our products within the information system sector now have the performances required in the competition.
4. In 1985, Ericsson further strengthened its position as the world's leading supplier of systems for mobile telephones.
5. Within important areas, such as radio communications and cables, we have shown that the trend may be reversed in a short period of time.

Profit Results 1985, 1986

Table in Million Kronor

Results After Depreciations

	<u>1985</u>	<u>1986</u>
1. Public telecommunications	1,282	1,200
2. Information systems	- 806	- 100
3. Cables	336	350
4. Radio communications	253	300
5. Defense products	178	180
Network construction	154	150
Components	22	20
Other	83	0
8. Real profits net	+ 333	+ 100
Joint costs of concern	- 198	- 200
Total business activities	1,637	2,000
- Finance net	- 953	- 900
= Result after finance net	684	1,100
+ Shares in profits of other companies	+ 35	70
- Minority shares	+ 159	- 200
= Profits before allocations	878	970

Note: The figures for 1985 come from Ericsson's annual report, whereas the statements for 1986 are DAGENS NYHETER's prognoses.

7262

CSO: 5500/2669

SWEDEN

BRIEFS

FRG TUBES FOR TELE-X--Vital parts of the transmitters of the Tele-X satellite do not come up to expectations. The French-made travelling-wave tubes will be replaced. "They are not ready for use in space," says Sven Grahn of Rymdbolaget. Instead, German tubes will be used. The Swedish Rymdbolaget has long questioned the reliability of Thomson-CFS' travelling-wave tubes. They reinforce the data and TV signals from the earth before they are retransmitted. The main supplier of the satellite, Aerospatiale, has now decided to replace the six French tubes by West German tubes, manufactured by AEG-Telefunken. The effect will remain unchanged. "We have on several occasions pointed out to Aerospatiale that the tubes from Thomson-CFS do not meet with our requirements," says Sven Grahn. Already in 1984, the launching of TDF-1, the French equivalent to Tele-X, was delayed on account of sudden transmission breakdowns in the tubes. Those problems are today regarded as having been solved. Instead, it is now a question of the overall quality and life of the series-produced tubes. From a technical point of view, the AEG-Telefunken tubes are not as sophisticated as those produced by Thomson-CFS. But it is believed at Rymdbolaget that they will work. Even in TV-SAT-1, the West German equivalent to Tele-X, they are abandoning the French tubes. Instead of a mixture of three West-German and three French tubes, they will now use six tubes from AEG-Telefunken. The entire European space industry is now anxious to find out what the French will do about their own satellite, TDF-1, which is scheduled to be launched at the end of this year. Tele-X is scheduled to be launched into space in June-July of 1987. [Text] [Stockholm NY TEKNIK in Swedish 10 Apr 86 p 2] 7262

CSO: 5500/2663

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